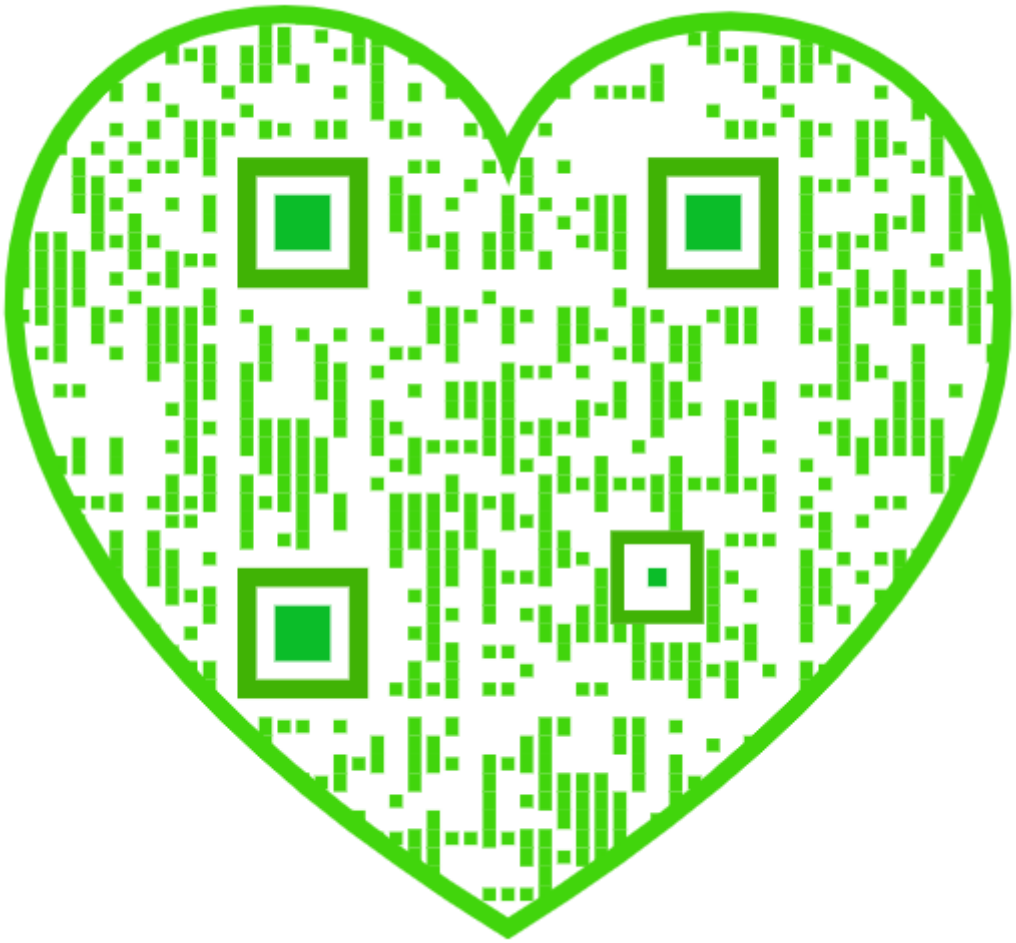


ARCHITECT AND ENGINEER

YOUNG & LLOYD, Architects, Oakland, California

JANUARY 1949

Metal Doors

DOORS in Aluminum, Bronze and Stainless Steel. Write or telephone today for complete information . . .

ARISTON
Metal Products

Michel & Pfeffer Iron Works, Inc.

KENNETH OPIE, *Manager Misc. and Ornamental Division*
Tenth and Harrison Streets, San Francisco 3, California
Telephone MArket 1-5966

Illustrated: Stainless Steel Entrance
HENRY L. KENNEDY, Architect
CHRISTENSEN & LYONS, General Contractors

X 720.5
A n 24 176
622460

• ARCHITECT AND ENGINEER

Vol. 176 No. 1

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

The E. K. Wood Lumber Company of Oakland was established by Edwin K. Wood, and his wife Marian S. and son Fred J. Wood; and Clarence A. Thayer and Orsan M. Kellogg in 1888. A sawmill was also operated at Hoquiam, Wash. [See Page 16)

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

JANUARY

EDITORIAL NOTES 4

NEWS & COMMENT ON ART 6

CATLIN GRADE SCHOOL, Kelso, Washington. Wolff & Phillips Architects, Portland, Oregon 8
By Arthur W. Priaulx

E. K. WOOD LUMBER COMPANY, Oakland, California 16

ERIC MENDELSOHN, Architect, A.I.A. 22
Hebrew University of Jerusalem Agricultural College, Rehovot, Palestine . 24
Maimonides Health Center For The Chronic Sick, San Francisco, California . 26
Temple and Community Center Beth El Congregation, Baltimore, Maryland . 28
The World University, Berkeley, California 30

A.I.A. ACTIVITIES 31

WITH THE ENGINEERS 32

HEADLINE NEWS & VIEWS 36
By E. H. W.

IN THE NEWS 37, 46, 47

ESTIMATOR'S GUIDE, Building & Construction Materials 41

BUILDING TRADES WAGE SCALES, Northern & Central California . . . 43

BOOK REVIEWS, Pamphlets & Catalogues 45

INDEX TO ADVERTISERS 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 88 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office. Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

. EDITORIAL NOTES .

THE PUBLIC'S CHOICE

The New York Chapter of the American Institute of Architects recently took a poll to determine the public's reaction to certain basic architectural principles in home construction, with the results showing a preference of 72 per cent in favor of modern architecture over the traditional types.

The poll was taken in conjection with the exhibit of two types of homes at the display of "Tommorrow's World" at the Museum of Science and Industry in New York City.

There is little question but that the individual who would be attracted to such an exhibit would have a preference for the modernistic trend in home design. Our wonder is that the percentage favoring liberalized thinking in home design was not considerably greater.

The average person, while enjoying modern architecture in the abstract, is bound by a certain sense of security to the more traditional approach to living. This may be due in part to the fact that to the average person the purchase or building of a home represents a lifelong investment and is not a commodity to be traded-in, or cast aside for a new model as is the case with the automobile, home furnishings, and home equipment and appliances.

The financial impact of home ownership to the average public is more than investing in novelty thinking, and even the most fanatic modern eventually has to live in the modern home of his choice where the true test of design preference comes with day-in and day-out utility living.

Modern home design attracts public attention and possibly the most valuable adjunct to modern vs traditional home design exhibits is not whether the public have an open or a closed mind on design, but that the public becomes aware of the need of an architect in the planning of any home.

* * *

"THE confidence and the affection of fellow-citizens are the most valuable and agreeable reward a citizen can recieve."—George Washington.

* * *

"ADVENTURE—that's Scouting"

More than two million two hundred thousand active Boy Scouts of America members will observe the 39th anniversary of BOY SCOUT WEEK in all parts of the United States, Alaska, Canal Zone, Hawaii, Puerto Rico, the Virgin Islands and Guam from February 6 to 12, 1949.

Cub Scout Packs, Boy Scout Troops and Senior Scout Units will hold open house, parents' nights, special investitures of new members, and generally enjoy a six day program of fun and fellowship.

Since 1910 when the Boy Scouts of America was established, 15,000,000 Scouts and leaders have been actively enrolled and the aim this year is to encourage more boys and more men to "Be Prepared" to help all Americans "Do a good turn Daily" and thus better understand what "On my honor I will do my best" is actually doing for their country.

* * *

"LET not him who is houseless pull down the house of another, but let him work diligently and build one for himself, thus by example assuring that his own shall be safe from violence."—Abraham Lincoln

* * *

OUR FORECAST FOR '49

This is the time of year when most experts go out on a limb and predict events to come, so in keeping with the expected and based upon the following authentic information which has come to our attention:

"Financial barometers of one kind and another continue to report reassuring domestic news"; "Automobile production currently is at the highest level"; "Building construction reached a new peak"; "Electric power output was up 10 per cent, reflecting sustained industrial activity"; "Merchandise sales on the whole, continue to show satisfactory increases"; "Industries at present are turning out just about all the goods that the supply of labor and materials will permit"; "Backlogs, generally remain enormous"; "Fire losses will reach an all time high of $700,000,000"; "Even more serious, more than 10,000 persons will be killed in fires—a third of them children"; "Worst of all, this loss is needless" and "As a matter of fact, there is little fluctuation in the entire domestic situation",

So! we predict the year 1949 will go down in the chronological records of history as the year following 1948 and the year preceding 1950.

* * *

CONSTRUCTION COSTS

It is estimated that the dollar value of all construction to be undertaken in 1949 will break all records by going 18-billion, 750-million dollars.

Of this, about $6.5 billion is expected to be residential and will represent some 875,000 units according to the United States Bureau of Labor Satistics, which is compared to an estimated 1-million units built in 1948.

The Bureau anticipates that construction costs for 1949 wil go up about 5 per cent.

Dreams
about
Marble Halls
come true . . .

when wise planning
chooses the best materials
for the most important construction
of all — the erection of a *school.*

Marble is beautiful, enduring,
sanitary, economical. No other
material is more easy to maintain or clean.

Literature available on request:
"Marble for the Home"
"Marble for the Hospital
"Stores Modernize with Marble"
"Marble Forecast 1949"

MIA

Marble Institute of America, inc.

108 FORSTER AVENUE, MOUNT VERNON, N Y

NEWS AND COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., Director of the California Palace of the Legion of Honor in Lincoln Park, San Francisco, announces the following schedule of exhibitions and special events for January:

EXHIBITIONS: The Museum's Contemporary American Acquisitions, opening January 20th; Sculpture of the 19th and 20th Centuries, opening January 20th; Thirteen Water-Colorists, starting January 20th; and the 3rd Annual Exhibition of Paintings.

EDUCATIONAL ACTIVITIES: Art classes for Children, ages 4-15, at 10:00 a.m. Saturdays under direction of Katharine L. Parker and Lilly Weil Jaffe; Adult painting class each Saturday at 2 p.m. under instruction of Frank Lobdell; Gallery tours of current exhibitions, each Wednesday and Friday at 2:30 p.m., by Katharine L. Parker and Lilly Weil Jaffe.

ORGAN RECITAL every Saturday and Sunday at 3 p.m. by Uda Waldrop.

FREE MOTION PICTURES are shown each Saturday afternoon at 2:30.

HAMMOND-HARWOOD HOUSE REOPENED TO PUBLIC

The Hamond-Harwood House in Annapolis, Maryland which is one of the outstanding examples of Colonial American architecture of the second half of the eighteenth century in America, has been re-opened to the public.

Owned and operated by the Hammond-Harwood House Association, Inc., it has ben closed for redecoration and refurnishing. A considerable amount of contemporary furniture has been recently acquired and a new set of curtains for the entire house has been copied from old documents by Franco Scalamandre and designed by Mrs. Lounsberry.

The house today gives the impression as when built in 1770.

SAN FRANCISCO MUSEUM OF ART

Exhibitions and events scheduled at the San Francisco Museum of Art, War Memorial Building, will include the following:

EXHIBITIONS: Design in the kitchen; New Paintings by Tom Lewis; Paintings by Robert McChesney, Byron Randall, Emmy Lou Packard, and Edward Corbett; Photographs by Donald Ross; Paintings by Leonard Edmondson, John Kwok, and Julius Engel; Photographs by C. L. Freehe; Permanent and Loan Collections of the San Francisco Museum of Art; and Prizewinners, of the San Francisco Art Association Annual Exhibitions, 1935-1948.

GALLERY TOURS are conducted evey Tuesday afternoon at 2:30 and on Sunday afternoon at 3:30 by special groups of art-informed guides selected from the membership. Mrs. E. Morris Cox and Mrs. George N. Crocker will be in charge of these tours during January.

CHILDRENS ART CLASSES are conducted each Saturday morning 10 to 11:30 under supervision of Betty Willis.

KNOW YOUR WORLD FILMS a series of documentary and educational films presented each Saturday and Sunday afternoon at 2:30. The FAMOUS FILM SERIES is shown each Tuesday evening at 8:00 o'clock.

Acquisition of four paintings from the Third Annual Exhibition of Paintings has been announced. They will be added to the Museum's permanent collection and include "West Wildwood", by Walter Stuempfig; "Ohio Magic," by Ben Shahn; "The Progenitors" by Charles Howard, and "From One Night to the Other" by Yves Tanguy.

On the occasion of its previous Annual Exhibitions, the California Palace of the Legion of Honor made cash awards for the prize-winning pictures. This year the Trustees of the Museum authorized an expenditure of $5,000 for the purchase of paintings to be added to its permanent collection. The Jury for the exhibition, together with the President of the Board of Trustees and the Director, selected as recommendations for purchase a group of thirteen pictures chosen from the entire exhibition, which was part invited and part juried. Subsequently a committee appointed by the Trustees selected four pictures from this group.

AMERICAN INSTITUTE OF DECORATORS

Conditions of the A. I. D. 1948 Desing Competition in fabric, furniture, floor covering, wall covering and lighting have been announced and entry forms are now available from the American Institute of Decorators, 41 East 57th Street, New York. City.

All designers of fabrics, furniture, floor coverings, wall coverings and lighting who have designed products offered for sale during 1948 are urged to compete, including members of the A. I. D., and students.

Members of the jury, having been chosen as representive of the educational, museum, architectural, interior design and merchandising fields,

include: Karl Bock, Robert Allen Jacobs, J. Labatut, Lloyd Morgan, Joseph Mullen, Charles Nagel, Jr., and Charles S. Shaughnessy. They will have authority to make a citation of merit and several honorable mentions in each of the five catagories; fabrics, furniture, floor coverings wall coverings, and lighting. Its decision shall be final.

Presentation of awards will be made at the 18th annual conference of the A. I. D. in New York City on March 21-23, and following public announcement, the winning designs will be placed on traveling exhibit.

CITY OF PARIS

The Rotunda Gallery will present the Seventh Annual Pacific Coast Textile Exhibition from January 11 to February 5th. This year's exhibition will include handwoven silks from Siam, handblocked textiles from Greece, Ascher of London, Raymond Duncan of Paris, together with a special group of ten weavers from the Pacific Coast.

In the ART IN ACTION SHOP the Pictures of the Month will be "Ballet I" and "Ballet II" by Barbara Herbert; a special Exhibit of pottery by West Coast Artists; and various collectors items including dolls by Beryl Boynton of Santa Fe, New Mexico.

LOS ANGELES ANNUAL ACHEVEMENT AWARD

The Construction Industries Committee of the Los Angeles Chamber of Commerce has announced a "Preliminary Outline" for the Annual Achievement Award, which is to be made upon some chosen member of the construction industry at the Annual Construction Industries Banquet.

Members of the construction industries may nominate candidates for the award, through the secretary of the Construction Industries Committee and the jury.

Consideration of award is to be upon the basis of (1) Achievement in Public Service, (2) Achievement in Service to the Industry, (3) Achievement in Public Relations, and (4) Achievement in the Science of Design, Construction and Materials. The award shall be made to an individual.

PACIFIC NORTHWEST MILLWORK FIRM EXPANDS

The Acme Millwork organization of Seattle, Washington, have recently expanded their manufacturing business by purchase of the former Navy warehouse in Kirkland which covers 7½ acres.

The new plant is a modern one story sprinkler equipped structure with over 50,400 square feet of clear space. One side of the building is provided with a covered railroad ramp and production is streamlined for highest efficiency.

Raw materials starting at one end of the building flows along production lines until the finished items reach the delivery dock for both rail and truck shipments.

H. W. Hansen, president of the firm, reports that within the very near future additional facilities may be added to the new factory.

COLUMBIA STEEL PLANT FORMERLY OPENED

Formal opening of Columbia Steel Company's new steel sheet and tin plate mill at Pittsburg (California) was marked by a dedication ceremony and open house this month.

Completion and operation of this new multi-million dollar mill was one of the most important industrial developments in the West since the end of World War II, and will supply tin plate to the great western canning industry and sheets to a wide range of Western manufactured products.

Civic officials, industrial leaders, business executives and the general public participated in the ceremonies during which employees and their families also had an opportunity to view the new operations.

The mill occupies about 24½ acres on the plant's 400 acres. Steel will speed through its giant rolls at 4000 feet per minute.

PORTLAND CEMENT ASSOCIATION ANNOUNCE PERSONNEL CHANGES

Three important changes in the research personnel of the Portland Cement Association have been announced by Dr. A. Allen, the Association's vice-president for Research and Development.

Harrison F. Gonnerman, Director of Research has been advanced to the position of Assistant to the vice-president for Research and Development: Hubert Woods, Research Director of the Riverside Cement Company of Los Angeles, has been chosen Director of Research for the Association; and F. R. McMillan, assistant to the vice president has resigned.

DEPARTMENT STORE

Contracts amounting to $200,000 have been awarded to Cahill Bros. of San Francisco, for the remodel of the Southeast corner of Grant Ave. and Sutter Streets in San Francisco. When completed the building will be occupied by the White House, Inc. W. P. Day & Harry Michelsen, San Francisco, are the architects.

ATTRACTIVE ENTRANCE

Catlin Grade School

Kelso, Washington

WOLFF & PHILLIPS, Architects

Portland, Oregon

Design An Ideal Classroom

Then Build a School Around It

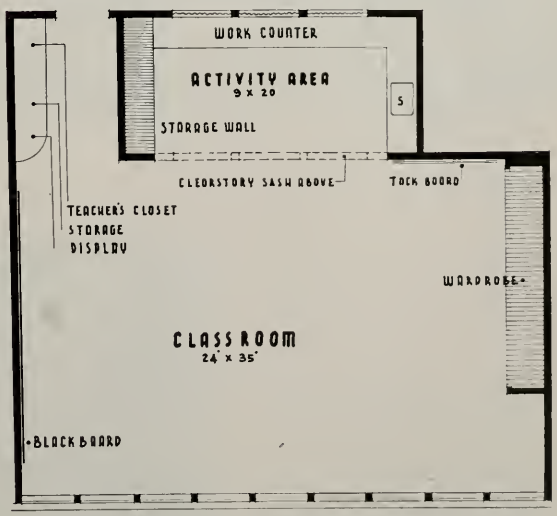
By ARTHUR W. PRIAULX

GEORGE M. WOLFF and TRUMAN E. PHILLIPS, Architects

When designing a modern school building, first create the perfect classroom, then build your school around it. That is the advice of Wolff and Phillips, Portland architects, who have designed several of the northwest's most outstanding and imaginative educational structures.

Latest creation of this first is Catlin Grade School at Kelso, Washington, acclaimed by the State Board of Education at Olympia as the most advanced teaching plant in their state. Since its completion in time for school last fall, Catlin School has become a star attraction with school boards and educators who have building problems in the immediate offing.

The modern classroom must have a warm, homey and soft feeling for the student, Truman E. Phillips contends. Children think then of their classroom as they do of



TYPICAL CLASSROOM

FLOOR PLAN of classic school room, a one-stop educational package

DESIGN AN IDEAL CLASSROOM . . .

MODEL CLASSROOM is shown above. View is from the window side looking towards the "activity area" in the rear.

RIGHT is close-up of the "activity area" showing use of bi-lateral lighting system which gives ample light.

Attractive wood-paneled halls add warmth and homey atmosphere.

their home and thus are more relaxed, less tense, learn easier, tire less quickly, he says. By the same token the teacher responds to ideal surroundings and her freshness and friendliness is passed on to the students, reflected by the careful designing of the classroom.

The "Catlin School Room" is a complete teaching unit where nothing has been forgotten, where every conceivable convenience and facility for both student and teacher has been provided. There are fifteen such packaged educational plants within a larger plant at Catlin.

The typical Catlin teaching unit looks something like this. The room is large and airy and one solid row of windows marks the outside wall. Featured is a bi-lateral lighting installation at the back of the room which gives as much light, an average of 125 foot candles across the entire room, at the back wall as against the windows. The bi-lateral lighting plan consists of clear story lighting from a vertical lighting surface. Sloping ceilings reflect light into the work room and eliminate glare. There are no blind spots, but even, eye-saving light everywhere in the room.

A rubber based asphalt tile flooring makes walking easy and does not tire the teacher who has to be on her feet all day. The room is a compact study in built-ins. One wall has cupboards, drawers, work board and shelving, all constructed from well-selected Douglas fir lumber. A low work bench along two walls, with closed shelves underneath with a sink and running water in each room is a thoughtful touch. A wardrobe coat closet, equipped with heating units to dry wet outer clothes, fits along part of one wall of every room. Laboratory equipment, teaching materials, books, stationery and supplies all have their special place and contribute to neatness and orderliness.

Each room has its own heat control thermostat with low-pressure steam convectors in each room along under the windows. Each room is ventilated.

In the kindergarten and first grade rooms another novel feature has been installed. Panel heating has been built into the floors because the small youngsters spend much of their time working and playing on the floor. Each kindergarten child has his own rug where he naps on the floor during rest periods and the hot water floor panel heat gives him maximum comfort and health factor.

Each room has sound deadening acoustical tile ceilings which serves to greatly reduce room clatter and sharp, piercing noises.

Another problem confronting the architects was to build a structure suitable for more than 500 students at a cost of $388,000 and still obtain a building that would endure. Judging from the endorsement of the state, local educators and visiting specialists, the objective was accomplished.

In addition to the fifteen classrooms, which are really the outstanding achievement in this remarkable building, the school contains a well equipped and lighted library which has attractive, finely designed book storage facilities on all four walls; a nurses and first aid room and a smaller infirmary to care for youngsters who are ill, until they can be taken home; a teachers room where lounge and rest rooms have been carefully appointed; a spotless kitchen and cafeteria.

ASSEMBLY ROOM where the entire community of Kelso meets in traditional multi-purpose functioning. Students and adults both enjoy the spaciousness and relaxing atmosphere.

ABOVE: Compact and convenient built-ins help the teacher to keep the room neat and everything in it's place.

BELOW: Charming detail of flush doors and woodwork mark the modern note throughout the Catlin School.

Probably the most interesting and popular room in the school is the multi-purpose auditorium which serves as a lunch room, assembly, practice room for music for both the school band and vocal rehearsal, for plays and dramatic productions and as a community room for P.-T.A. and other organizations of parents, students and community. The auditorium is well lighted, has an excellent stage and is truly a community room.

Another feature of the Catlin school are the two covered, fresh-air play spaces or gymnasiums. These spaces are cement floored, adjoin the main building, are roofed and have two solid walls. They are divided by a heavy wire screen, and the outer wall is constructed of wood up to within ten feet of the roof and wire netting is used to provide for fresh air while the children are at play and protected from the rain and some of the cold. Every child in school can play in the two play spaces at the same time and still engage in games.

One classrom is being specially built to care for spastic students and will probably be opened next year.

Catlin school is built like a huge U with the gymnasium and kitchen occupying one wing and the kindergarten and other classrooms forming the opposite wing. A special entrance is provided for kindergarten students and first graders, and the pre-school tots also have their own small courtyard for play, protected by a brick wall.

The exterior of the building is brick faced and in almost every other instance Wolff and Phillips have used native Douglas fir panels and lumber throughout the structure.

Wood was used in a typical instance in the wide halls where 12 inch vertical grain Douglas fir paneling was installed horizontally as a seven-foot wainscoting. Architect Phillips points out that wood has several advantages in school buildings. It is easily maintained in good appearance, and it has a much warmer appearance.

THIS COVERED PLAY SPACE simulates the outdoors and is protected from rains and cold.

Catlin school is a single-story building and the safety factor in case of fire is as near 100% efficient as is possible to obtain in a public structure, Phillips believes.

Another highlight of this interesting school building is the very high quality of the millwork which was all manufactured at nearby Tacoma. This firm made all of the flush doors, all cabinets, built-ins, wardrobes, shelving, panels and glassed partitions such as separate the principal's office and reception room from the hall. The flush doors, made of Douglas fir, are exceptionally attractive and practical.

All woodwork in the school has been finished to get the full benefit of the fine texture and grain of the selected Douglas fir lumber. A simple treatment of one coat of shellac and two coats of clear varnish has created a striking effect of light golden browns.

There seems to be genuine agreement that the architects have obtained maximum utility in this splendid school building. Nothing has been overlooked in the effort to create a perfectly equipped teaching plant, where teacher and student meet in ideal surroundings, with every facility to encourage good educational results. Within the limitations of the available funds Wolff and Phillips were also able to provide for recreation requirements of the 500 students. Best of all, they were able to retain the school's traditional function as the community meeting place, by designing an assembly room where parents as well as students may enjoy themselves and feel like they belong.

E. E. Dingerson, principal of Catlin school, with twenty-one years of teaching experience in the Kelso district, contributed many suggestions from his knowledge of educational plant requirements. "This building is easier on teachers and students than any conventional school and at the end of the day it is amazing how few teachers seem weary and cross and how few students show the effect of a day in school. We have a place for everything needed in the classroom, and have provided every facility in a completely functional unit—our Catlin classroom."

Dingerson went on to say that they started out to build a school building that was fundamental and all traditions and conventions were ignored if they didn't fit into the pattern of simplicity and fundamentality prescribed in the original thesis.

"We believe we have achieved a plant where children can live comfortably while learning, for living is learning," Dingerson pointed out.

ARCHITECTS SELECTED FOR STATE OF CALIFORNIA WORK

Selection of the first group of private architects who will be offered contracts for the preparation of plans on State of California building projects has been announced by Director of Public Works, C. H. Purcell. The Architects were selected upon recommendations submitted by State Architects Anson Boyd to meet an emergency for which State Civil Service personnel was not available.

The list of projects and architects to whom contracts have been submitted include:

For classroom building and incidental master plan studies at California State Polytechnic College, San Luis Obispo, to Allison & Rible, Los Angeles.

For classroom, dormitory and administration building at California Maritime Academy near Vallejo, to Clark and Stromquist, Palo Alto.

For Southern California School for the Deaf to be built at Riverside, to Risley & Gould, Los Angeles.

For women employee's quarters, Veterans' Home, Yountville, to Albert Roller, San Francisco.

For women's domiciliary barracks, Veterans' Home, Yountville, to Meyer & Evers, San Francisco.

(See Page 21)

(Photo by Giosso)

E. K. Wood Lumber Co.

Oakland, California

ARCHITECTS: Young & Lloyd

STRUCTURAL ENGINEER: Walter A. Buehler

Completion of the new sales display, general administration, and executive office building of the E. K. Wood Lumber Company in Oakland, California, recently, represents the gathering and putting together "ideas" which began back in 1888 when Edwin K. Wood, his wife Marian S. Wood, and son Fred, arrived on the West Coast from far away Michigan and founded the firm's initial sawmill at Hoquiam, Washington, and the first lumber distribution yard at the foot of Spear Street in San Francisco.

A short time later another distribution yard was established at Redondo Beach in southern California. Subsequently sawmills were operated in Bellingham and Anacortes, Washington; Reedsport and Roseberg, Oregon, and to facilitate the shipment of lumber to yards in California and the Pacific, the Company operated a fleet of sailing vessels—later wooden schooners, and in 1923 purchased three steel steamers from the U. S. Government, which were operated until World War II when they were requisitioned by the Government and the Company went out of the shipping business.

Recognizing the tremendous development possibilities of the Pacific Coast and particularly California, retail yards were established in Oakland in 1906, following the earthquake and fire in San Francisco, the Redondo Beach yard was moved to San Pedro, and a new yard was established in Los Angeles. Since that time yards have been opened in Long Beach, Hollywood, Pasadena, Sierra Madre, La Verne, Ontario, Riverside, Indio, Thermal, Temple City, Whittier, and the E. K. Wood Supply Company a subsidiary.

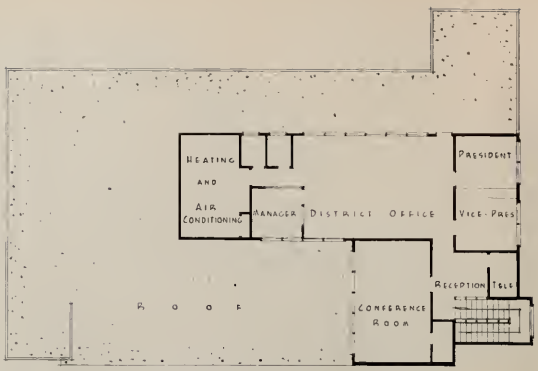
Based upon such a long history of sustained progress and development it is quite natural that the Company, in expanding the Oakland property, would follow a carefully selected "Master Plan" which not only provided for the new building, but also took into consideration certain long term planning.

Architects Young & Lloyd of Albany, who were called in to confer with the lumber company management, were immediately faced with the difficult problem of directing the construction of new and greatly expanded office and yard facilities, but, the construction of the new building and service yard would have to be done without interruption to the flow of everyday business. Moreover, numerous old and obsolete structures would have to be torn down, yard areas paved, old concrete drive-ways and paving torn up and removed, a greatly enlarged storm drainage system would have to be developed which would entail excavation of ditches and laying of pipe to the Oakland Estuary.

Another factor confronting the "Master Plan" for the development was that in rearranging the yard to take care of the new building, it would

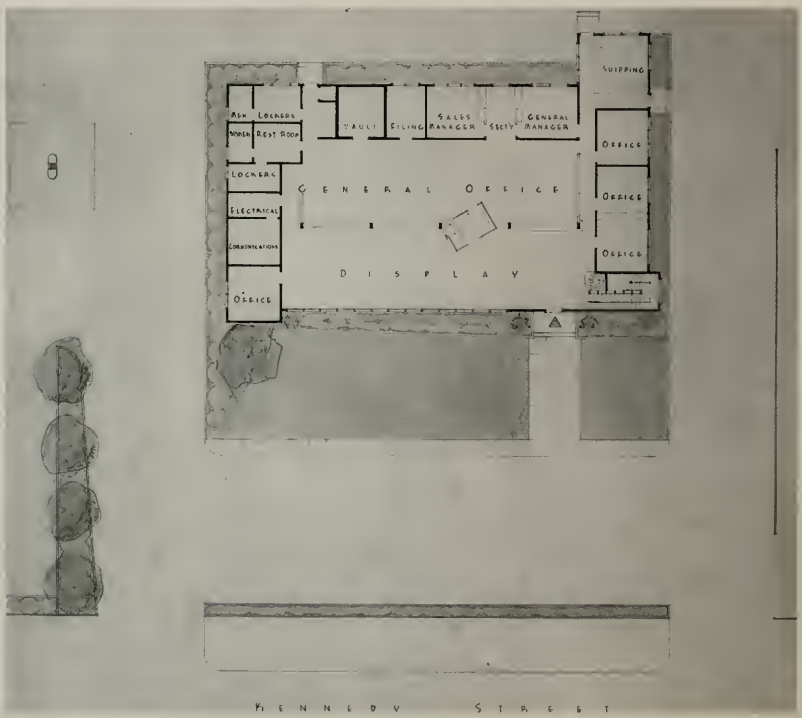
STAIRWAY to Conference Room on the second floor as seen from the upper reception room looking down. Staggered windows are of corrugated glass while the stair skirting is sliced African mahogany and the hand rail is of Birch.

Photo's are by Cal-Pictures and Giosso



ABOVE: Plan of second floor showing location of executive offices, District offices, Conference Room, Receptionist and some utility services.

BELOW: Use of ground floor space emphasizes convenience of general offices, sales department, Display area, and numerous storage and locker. (Andrew Gotzenberg, Landscape Architect)



OFFICES are striking examples of uses of various woods. Individual rooms feature Red Cedar, Paneled Redwood planking, Ponderosa Pine planking and Douglas Fir Plywood. Floors are of asphalt tile, ceilings acoustical tile and walls are sheetrock.

also be necessary to reroute a railroad spur track, and this would have to be done without interruption of the shipment in and out of the yard of a sizable volume of lumber.

During the course of building design it was decided to incorporate the San Francisco district offices in the Oakland offices, and this decision by the Company resulted in the addition of the second floor which permits functioning of the District Office as a part of the Oakland office, yet arrangement of the building and offices allows for complete independence if desired.

In developing the yard it became necessary to repave 8 acres, install a new fire line, a new trunk sewer, and a complete storm drainage system. All of this new yard construction, plus the tearing down of older buildings was successfully carried out under the planning and supervision of the Architects.

The new building itself serves as a center of communication and activity. Contact with the yard is provided by means of a loud-speaker system and inter-office communication is by means of a modern dial system.

The exterior of new building is attractively done in stained Redwood and sheet transite, with a large brick veneer panel used strictly as a veneer, over the main office doorway to obtain a contrast in color and texture of brick for the background of large lettering denoting the "E. K. WOOD Lumber Company." Midway between the top and bottom of the brick veneer is a raised replica of the Diamond-W insignia which denotes and identifies the E. K. Wood Lumber Company products.

Simple styling is manifest throughout the building it being the architects conception of good modern architecture.

The main offices, display and sales rooms are lighted with indirect fluorescent lamps and the main office counter and columns are constructed of imported sliced African Mahogany. The hand rail at one end of the office working area (See page 19) is a Birch wood rail and is the same pattern as the hand rail used on the nearby stairway which leads to the second floor where the Reception Room, District and Executive offices, and a spacious Conference Room is located.

A wide varity of woods are used in various places. The manager's office is done in beautiful Red Cedar; the general manager's office has been finished in Redwood planking; another office has been finished in Ponderosa Pine plank, while Douglas Fir plywood has been used throughout the building for wainscoting. It is also used as a separation material between numerous book-cases, coat closets and office storage space.

Bamboo wall paper has been used on the back wall of the general office to secure a sparkle in biege.

Floors are of asphalt tile laid over Plyscord and are in complete harmony with the balance of the interiors. The ceilings are acoustical tile and absorption of sound permits spacious arrangement of general offices without noise interference between one department and another. Except for the wood walls, the walls are of sheetrock.

There is a kitchen off the general offices on the main floor, and all lockers, storage areas, and similar office utility spaces are built in with flush doors.

The stairway leading from the main floor offices to the second floor is natural lighted by means of corrugated glass windows and is attractively finished with a sliced African mahogany stair skirting and Birch hand rail.

The second floor Conference Room is beatifully paneled in imported sliced African mahogany and this room also has an acoustical tile ceiling, and indirect fluorscent lighting. A soft beige overall carpet is in complete keeping with soft grey-green draperies and special furniture upholstered in grey-green leather. Adjoining the Conference Room is a kitchen equipped with hotplate, sink, and refrigerator.

Air conditioning throughout the building is of the forced air type with a thermstatic control. There is also a limit switch which allows for air circulation without heat during certain seasons of the year.

The building in general is arranged as the key to the traffic flow in and out of the yard. Traffic enters at the right side of the building, passes the shipping office, circulates through the yard and then exits on the left side of the new building.

The recent construction included, in addition to the general office, sales and display building, a garage and sizable storage building which have been placed so that all vehicles entering or leaving the property are under close supervision.

CONFERENCE ROOM: This room is fully paneled in sliced African mahogany; with acoustical tile roof, indirect fluorescent lighting.

It is finished with soft beige overall carpet, very soft grey green drapes and the furniture is upholstered in grey green leather.

ARCHITECTS SELECTED STATE OF CALIFORNIA

(From Page 15)

For four classrooms, shop and laboratory structures at San Diego State College (four separate buildings) and incidental master plan work, to Earl Giberson, Samuel Hammill, Frank Hope and Johnson & Hatch, the master plan work to be done under supervision of Johnson & Hatch.

For laboratories and office building for Department of Public Health, Berkeley, to W. D. Peugh, San Francisco.

Purcell acted to break a bottleneck in the State's huge building program created by a serious shortage of personnel in the Division of Architecture. In spite of an extensive recruitment campaign conducted by the State Personnel Board in eastern and midwestern states in the hope of inducing architects, architectural engineers, designers and draftsmen to accept employment in the Division of Architecture, under the California State Civil Service, State Architect Boyd said he still needs more than 300 men in these professional classes.

Approval of Purcell's action was given by the Personnel Board, whose executive officer, John F. Fisher, wrote to Boyd:

"We regret the necessity of informing you of our inability to furnish the required professional type of help you estimate is necessary to meet the architectural requirements of these projects."

Boyd said he will shortly recommend to Purcell architects for employment on plans for five branch offices of the Department of Employment to be located at Stockton, Bakersfield, Hollywood, Long Beach and Riverside.

In making the announcement Purcell said that the employment of private architects had been approved only because of the existing emergency. The contracts, when executed, will be subject to approval by the State Department of Finance.

COMMERCIAL STANDARDS

Recent Recommendations

PONDEROSA PINE and SUGAR PINE PLYWOOD. A recommended Commercial Standard for Ponderosa Pine and Sugar Pine Plywood has been circulated by the Commodity Standards Division of the National Bureau of Standards to manufacturers, distributors and users to determine a national recognized specification of minimum requirements in eight grades. Test methods, standard sizes, size tolerance, reinspection rules, labeling and nomenclature and definitions are also included.

COPPER and COPPER-ALLOY ROUND SEAMLESS TUBE. Simplified Recommendation R235-48 are now available. It is not intended to apply copper and brass pipe, copper water tube, automotive service tube, refrigeration service tube, and heat exchanger tube, however use of the preferred sizes listed will enable tube mills to schedule longer runs with less frequent resetting to tools.

EAVES TROUGH, CONDUCTOR PIPE, FITTINGS, RIDGE ROLLS. A proposed revised R29-42 has been submitted manufactures, distributors and users, is concerned with rain carrying equipment for buildings. Would eliminate ridge rolls, 1½ inch plain round gutter pipe, box gutter styles G and J, one size of style K box gutter, and roof gutter styles B and BB. Aluminum and stainless steel products are added.

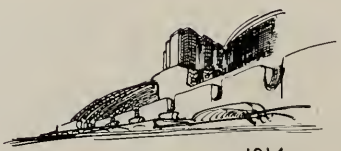
COPPER WATER TUBE AND COPPER AND BRASS PIPE. A proposed revision of R217-46, submitted to producers, distributors and users proposes to add three sizes of type M tube, for use in waste, soil, and vent lines and ¼ inch type L tube. A 12 foot straight length of tube has been added.

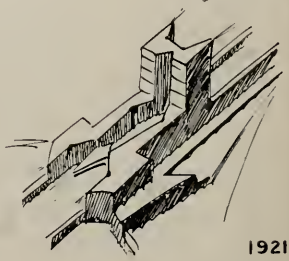
COARSE AGGREGATES. Simplified Practice Recommendation R163-48 dealing with sizes of crushed stone, gravel and slag, coarse aggregates for road building, airport construction and similar uses is available. Gives normal size of sieve openings in inches or sieve number, and the percentage by weight of material passing each sieve. Sizes of aggregates for sewage trickling filter media have been added.

POWER CRANES AND SHOVELS. A recommended commercial standard for power cranes and shovels has been submitted to producers, distributors, and users. Proposes uniform methods of supplying specification data, requirements, and definitions for fair competition and applies to full revolving types, crawler, truck and wheel mounted, including front end operating equipment for clamshell, dragline, lifting crane, pile driver, shovel and hoe operation.

Eric Mendelsohn
Architect, A. I. A.

Lecturer on Architecture
University of California





Ever since Eric Mendelsolm opened his office in Munich, Bavaria, almost thirty years ago, he has been creating designs that were recognized throughout the world as outstanding examples of contemporary architecture. Always a forerunner in his field, he has been uncompromising in what he knows to be right.

Consequently his buildings and projects have the strength of character that mark them as his particular work. He knows how to show his clients why it is better to consider each structure as their own particular problem, a new subject to be treated individually, with regard only for those established precedents which have direct bearing on the case, rejecting all unrelated patterns of planning and esthetic treatment.

This attitude toward architectural design has resulted in a wide variety in Mendelsolm's work.

The hard clean cut, sweeping lines of his department stores—the plastic flow of the Einstine tower; the rural charm of the Agricultural College in Palestine; the dignity of the Jerusalem University; the rhythmic curves of the temples in Baltimore, Cleveland and Saint Louis—each has its own distinct personality.

There is little need to discuss here the millions of dollars worth of projects that he is responsible for. Books have been published on these in several languages.

Mendelsolm looks twenty years younger than he actually is. One reason may be that he is young in spirit, for in spite of the fact that he is inflexible to compromise, he is extremely flexible in accepting new methods, new materials, and in discovering new ways to solve the problems presented to him.

His method of approach to a subject varies from the average in two ways. First, in the making of innumerable thumb nail sketches of plan and exterior until the spirit of the project is determined; second, in an extremely thorough development of the project through successive stages of moulding, shaping and studying of the whole without deviating from the initial idea determined upon.

Keeping all first sketches down to a few square inches in size stresses the important elements of plans and facades without getting sidetracked in detail. When these are established, plans are developed at a scale of one thirty-second of an inch to a foot, then at a sixteenth, than an eighth, and quarter.

All architectural elements of facade and detail are studied in perspective rather than straight elevation. These are made quickly in rough freehand, but give a better idea of actual appearance than the standard way of working out studies in geometrical projection.

These sketches, together with scale models of cardboards and plastic or of plasticine are carried right on through the working drawing stage. The plasticine model enables one to study changes in proportion, simply by carving the model and using strips of cardboard for cornices and balconies. Models are usually made at the scale of one thirty-second or one-sixteenth of an inch to the foot.

Summing up then, we can learn four things from Eric Mendelsolm: **First,** Do not be afraid to use your imagination; **Second,** Decide how you will express the client's needs, and stick by your guns; **Third,** It is worth while to establish and keep the general relation of design elements before working out details (This seems elemental, yet is often neglected), and **Fourth,** Three dimensional studies should be carried on throughout the entire development of planning from the first conception to the last detail.

(Alfred Bernheim, Photo's)

HEBREW UNIVERSITY OF JERUSALEM—Agricultural College Rehovot, Palestine

After two year's study in the University of Jerusalem students may qualify for courses in the Hebrew University's Agricultural College to receive that final practical training which lasts from two to three years.

The Agricultural program of Israel is vitally important to the nation. Many immigrants without previous farming experience, as well as native citizens, wished to become scientific farmers. Consequently the Agricultural College was built in 1938-39.

A beautiful site was found on a knoll overlooking rolling hills covered with orange groves. It is on the main road from Ramlels to Gaza, about thirty-five miles from Jerusalem and ten miles from Tel Aviv. The land surrounding the building site is used as an agricultural experiment station.

The requirements were to plan a building that could easily be expanded as funds were available, and one that would require a minimum of upkeep. It was to be rural in character with rooms well ventilated and insulated against the summer sun.

AT LEFT is shown main entrance as seen from College Drive, with access to Library wing and Laboratory wing. Power Plant is in foreground.

Note the transition from rugged native stone, to hammered concrete, to the warm tones and texture of the tile roof.

ENTRANCE and Corridors are open.

Eric Mendelsolm was chosen as its architect, not for any previous experience he might have had in school planning, but for his ability to make any design problem meet its requirements from an esthetic as well as a practical point of view. The choice proved a good one for all requirements were met in a superb manner.

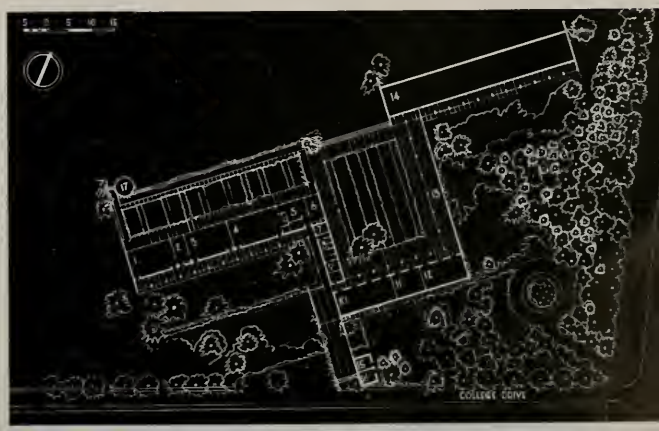
The building is one story throughout. Walls, columns and foundations are of reinforced concrete. Ceiling construction consists of rigid fiberboard on plaster, carried on precast concrete joists. Exterior walls are partly cement rendered, partly bush hammered. Forms were smooth and scrubbed clear before using.

Wood rafters support the red terra cota tile. The tile is of the flat interlocking type used throughout large areas of Europe and the Mediterranian. The lower side of the projecting roof that covers the corridors is ceiled with impregnated deal boards carried flush to the eaves.

Floors are of 8″ x 8″ terrazzo tile except in the laboratories where terra cotta tile is used, and in the corridors which have concrete slabs. Rooms are cross ventilated by high openings on the corridor side, including a draft from the larger windows on the north side.

KEY

1 & 3	Biology Laboratories
2 & 5	Preparation Rooms
4	Chemistry Laboratory
6	Lecturer's Room
7-9	Store and Cloak Rooms
10	Library
11 & 12	Lecture Rooms
13	Future Pergola
14	Future Extension
15 & 16	Engine Room and Power Plant
17	Existing Water Tower



Sketch View from Sutter Street *(Dean Stone & Hugo Steccati Photographs)*

MAIMONIDES HEALTH CENTER

For The Chronic Sick

San Francisco, California

TOTAL AREA—43,284 Square Feet

I. THOMPSON, Structural Engineer

CLYDE BENTLEY, Mechanical Engineer

DR. J. A. KATZIVE, Director of Mt. Zion Hospital, Medical Consultant

The site between Sutter Street (to the South) and Bush Street (to the North)—though only 100 feet wide—was chosen because of its proximity to Mt. Zion Hospital with which the Health Center cooperates and shares Heating Plant, Laundry, Storage, X-Ray and operating facilities, and to the Federation of Jewish Charities, the sponsor and chief administrator of the center.

The Health Center is divided into three distinct but interrelated buildings: Administration, Ward Building and Treatment Wings.

The Administration on Sutter Street provides easy access for ambulant patients and visitors not arriving by car.

It serves as buffer against street noise, provides seclusion for the Patio and, being only one-floor high, forms the architectural transition to the 11-story Ward Building.

The Patio was introduced because chronic patients—approximately half of them not bedridden —need ample outside space to lie, lounge and stroll around. The patio particularly takes advantage of the California climate. The glazed-in passage connecting Administration and Ward Building serves the same purpose on rainy days. It provides a surprising and pleasing view to the flowering trees and still water of the Patio.

Furthermore, the patio makes it possible to set

OVERHEAD VIEW of entire project. Number of stories can be increased without blocking light from the utility side of the ward building.

the high Ward Building in the center of the 300 ft. deep lot to protect it from traffic disturbances, and to permit sufficient space for the development of the Treatment Wings on Bush Street.

The Ward Building. In order to expose all wards to the South, the structure resulted in a multi-story building. This permits, at the same time, to add additional floors without disturbing the function of the building.

Cantilevered terraces along the wards, well sheltered from the cold Northwest winds, are for all year round use.

The Treatment Wings, serving in- and outpatients, are grouped around the service yard in low buildings and in such fashion that the number of stories can be increased without blocking the natural light of the utility side of the Ward Building.

The East and West setbacks of Administration, Passage and Treatment Wings permit the planting of a double row of evergreen trees visually separating the Center's grounds from the back yards of the adjacent buildings.

In its first stage the Health Center will comprise 83 beds, in its final stage 143 beds. The structure is reinforced concrete throughout, all fronts being cantilevered to permit an uninterrupted flow of light into the buildings. For cross-ventilation, corridor ends are open.

Construction has started and will be finished in 12 months.

L UTILITY FRONT (North Side). Courtyard onto the street giving easy access to all parts treatment wing and utilities.

MODEL WARD FRONT (South Side). Provides easy access, seclusion for the Patio, and serves as buffer against street noise. All wards face South.

Preliminary Sketch *(Dean Stone & Hugo Steccati Photo's)*

TEMPLE and COMMUNITY CENTER BETH EL CONGREGATION

Baltimore, Maryland

TOTAL AREA—66,000 Square Feet

J. THOMPSON, Structural Engineer
CLYDE BENTLEY, Mechanical Engineer

The Beth El Congregation Temple and Community Center is situated on a four acre tract on Hilton Street in Baltimore, Maryland. The entrance is on the high point of a hill that slopes rapidly away from the street, dropping forty feet to the South east corner in the rear.

The Temple area, composed of lobby temple proper, foyer and assembly, is the central structure from which the social rooms with Chapel and the school radiate. The administration, adjoining the school, and the temple area form an open court where, according to the deed, no building is permitted. The gymnasium below the assembly makes use of the natural slope.

The main entrance is protected from the rain by the projection of the second story. Entering the glass walled lobby through two sets of glass doors one faces a colorful mosaic flanked by a large stairway on both sides. These lead to an ample cloak room and lavatories which serve the whole Community Center. On the right is the Chapel wing with ladies lounge, kitchen and men's fellowship room. The Chapel may be enlarged by opening the folding partitions that separate it from the lounge and fellowship room.

At each end of the lobby are corridors that lead to the foyer of the temple. The one on the South is open, the other glazed. The walls of the foyer consist of huge sliding panels that when open connect the Assembly with temple and Assembly, thereby increasing the seating capacity from a normal 900 persons to a total of 1600 persons.

The floor of the temple follows a slight curve to provide better view for all. Seats are to be the theater type and follow a long radius curve. Natural light is provided through windows at each end. The windows back of the arc will be of multi-colored glass, and are protected from sunlight by high barrel vaults which project above the triple vaulted ceiling. Ceiling vaults run laterally, illuminated by fluorescent lights in continuous troughs at the spring line of the arch. The vaults are slightly eliptical to overcome the illusion

MODEL VIEW from Hilton Street. Steel frame, brick veneer walls with haydite or cinder block backing. Steel decking over steel beams for vaulted roof: curved roofs to receive metal covering; all other roofs, tar and gravel.

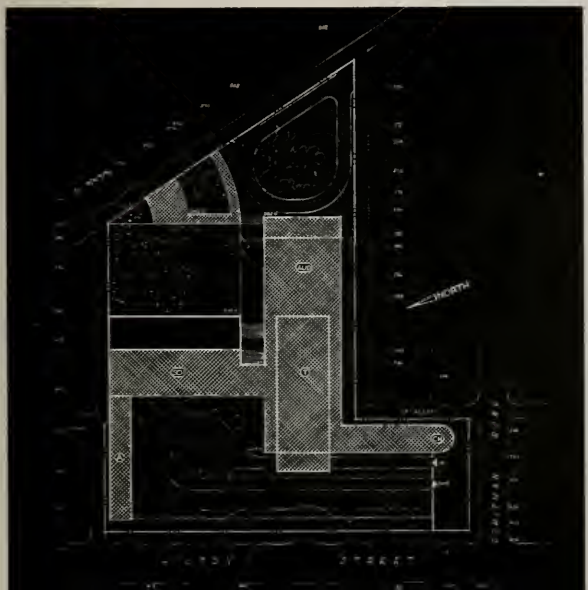
of foreshortening, as their high point is 50 feet above the main floor line. Additional light coves run along the lateral walls twelve feet above the floor. The temple proper is about 66 feet wide by 100 fet long.

The rear unit consisting of an assembly hall of approximately the same area as the temple, below which will be a gymnasium with locker and shower rooms to be built at a later date. The present foyer and future assembly will be 22 feet high. The gymnasium is also 22 feet high and is located in a position to take advantage of the natural slope.

The administration wing, adjoining the school will be built in the future. At present the ground floor of the classroom wing will contain offices for the Rabbi, secretary, and director as well as a general office, mimeograph room and vault. These will later be converted into classrooms. The social activity room and library will remain part of this unit. The balance of this lower floor and all the second floor is devoted to classrooms with one room serving as a teachers office.

Storage space, boiler rooms, air conditioning fan and blower room, and caretakers apartment are located below the main floor. Provision is also made for three future classrooms at the lower level.

Construction consists of steel joists and studs, metal lath and plaster partitions, brick veneered Haydite exterior walls, terrazzo floors over concrete base, acoustical tile ceilings, and built up tar and gravel roof, except over the vaults and dome which are to be metal covered.



KEY:

A Administration

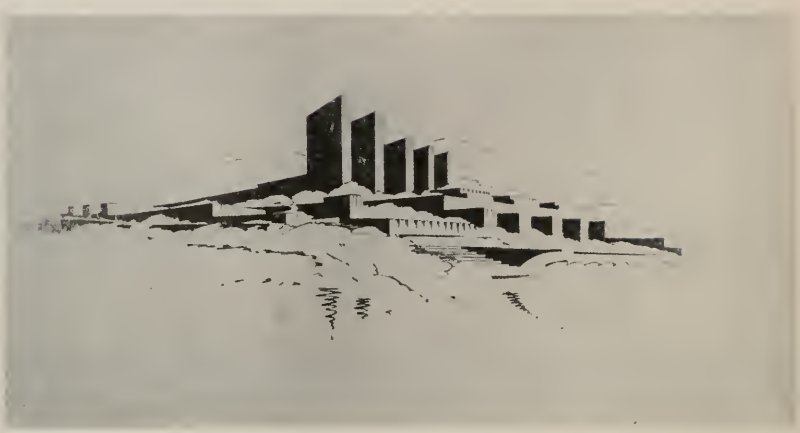
SCH School

T Temple

AUD Auditorium over gymnasium

CH Chapel and Social rooms. Caretakers apartment under.

The building on the rear of the site is to be a kindergarten, to be built in the future.



PROJECT

The World UNIVERSITY

BERKELEY, CALIFORNIA

The World University, Berkeley, California, 1942, uses the shore of San Francisco's bay for water sports and the University's social center, which is immediately connected with the five dormitories and the traverse studio building of the fine arts department: architecture and engineering, painting and sculpture, music and dance. The front building, bridging the University's bay-side entrance, serves the central administration. To the left, around the patio, are grouped the colleges for advanced studies: theology, philosophy and mathematics, leading to the science departments—human sciences: economics, sociology, medicine; and natural sciences: physics, chemistry and agriculture. The cultural institutes of the five world regions, America, Africa, Asia, Europe and Russia, with their elongated buildings for permanent exhibitions, crown the crest of the hill.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
James Macmillan, President; Arthur T. Brown, Secretary, 740 N. Country Club Road, Tucson, Arizona.
Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.
Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.
Colorado Chapter:
Raymond H. Ervin, President; James M. Hunter, Secretary, 2049 Broadway, Boulder, Colorado.
East Bay Chapter:
A. Lewis Koue, President; James H. Anderson, Vice-President; Loy Chamberlain, Secretary; Chester H. Treichel, Treasurer. Office, 3833 Piedmont Ave., Berkeley, California.
Montana Chapter:
Ralph H. Cushing, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.
Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.
Oregon Chapter:
Frank Roehr, President; Sidney W. Little, Vice-President; J. Holman Baines, Secretary; Don Edmundson, Treasurer. Office 619 Builders Exchange Bldg., Portland 4, Oregon.
Pasadena Chapter (California)
Breo. Freeman, President; Melville Garton, Vice-President; Roland E. Coate, Treasurer; Burton Romberger, Secretary; and Robert Ainsworth, Harold J. Bissner and Roy A. Kazebier, Directors. Offices, 1041 E. Green St., Pasadena 1.
San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hotch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.
Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.
CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.
Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.
Spokane Chapter (Washington):
Noel E. Thomson, President; Kenneth D. Storment, Secretary. Hutton Building, Spokane, Washington.
Utah Chapter:
George Cannon Young, President; Theodore R. Pope, Secretary, 29 South State Street, Salt Lake City 1, Utah.
Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.
Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.
Hawaii Chapter:
Kenneth W. Roehrig, President; James Morrison, Secretary, 334 Federal Bldg., Honolulu, T. H.

ARCHITECT WRIGHT GIVEN GOLD MEDAL

Frank Lloyd Wright, America's distinguished connoisseur of modern architecture, has been selected to receive the Gold Medal of the American Institute of Architects, highest honor of the national organization.

Douglas W. Orr, President of the A. I. A., in announcing the award said Wright was selected to receive the Gold Medal by the Board of Directors "in recognition of Mr. Wright's distinguished contribution to the profession of architecture."

Presentation of the award will be made at the 81st Annual Convention of the Institute to be held in Houston, Texas, during the annual dinner on March 17th.

Wright first won international fame as architect of the Imperial Hotel in Tokyo, which he designed to withstand earthquakes successfully. His work has been termed "The New School of the Middle West" and in Europe "The American Expression in Architecture."

Awarding of the Gold Medal to Wright was endorsed by the Northern California Chapter of the A. I. A.

ARCHITECT HONORED

Leopold Arnaud, Dean of the School of Architect of Columbia University since 1937, has been inducted into the Foreign Legion of Honor by Ludovic Chancel, Consul-General in New York, in behalf of the French Government "for his cham-

(See Page 39)

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Anderson, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas; Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Steve Barnes, President; Harry W. Bolin, Vice President; Lewis K. Osborn, Sec-Treas. DIRECTORS Richard W. Ware, Geo. E. Brandow, L. T. Evans, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

AMERICAN SOCIETY OF CIVIL ENGINEERS

"America's Biggest Power-Building Program" was the subject of a technical program presented by the San Francisco Section on December 21st. Speakers included I. C. Steele, Vice-president and Chief Engineer, P. G. & E. Co.; O. W. Peterson, Engineer of General Construction and H. W. Haberkorn, Assistant Engineer, General Construction Department of the P. G. & E. Co.

MEMBERSHIP: Recent new Members include John B. Hughes and Ward P. Webber; **Associate Members,** C. E. Field, Herbert B. Foster, Jr., and Paul F. Keim; **Juniors,** Lawrence C. Ames, Jr., Philip E. Johnson, Richard D. Coleman, Christopher Y. Lau, Charles L. Cutting, Benjamin D. Van Zandt, William H. Griffiths, and Rodney D. Westfall.

Life memberships have been presented to the following members: Guy W. Hayler, Clifford H. Nordwell, Nathan A. Bowers, George W. Pracy, Archibald A. Brown, Clarence E. Seage, Earl C. Elliott, Leslie W. Stocker, and Clarence J. Green.

PREVENT FIRES and EXPLOSIONS Caused by EARTHQUAKES!

Plus a Manual Control For Other Emergencies!

SAFETY ENGINEERS and scientists say the Sentinel is the most accurate and dependable earthquake actuated shut-off valve in the world!* On the job 24 hours a day! A record of more than 10 years of reliable service . . . *proven* during a period which included two major seismic disturbances. * Names on request

Take No Chances . . . Install The

SENTINEL

AUTOMATIC GAS SHUT-OFF VALVE

Designed to shut off automatically when there's an earth shock or explosion sufficient to damage buildings or pipe lines. Listed by the Underwriters' Laboratories and specified by leading architects and engineers for installation in schools, fire stations, factories, theaters, churches, stores, municipal, military and utility buildings. A. I. A. File No. 29-F-6

Write for illustrated folder.

Indispensable in live seismic regions.

Recommended for use with Liquified Petroleum Gases.

Thousands installed in the United States.

List of installations available on request.

Available at leading wholesale plumbing establishments.

Indorsed by National Bd. of Fire Underwriters.

Leading Fire Prevention Engineers Approve.

SECURITY VALVE CO.

410 San Fernando Rd., Los Angeles 31, California

Phone CApitol 6191

JESSE ROSENWALD NAMED PRESIDENT S.E.A. OF NORTHERN CALIFORNIA

Jesse Rosenwald, consulting structural engineer, San Francisco, has been elected president of the Structural Engineers Association of Northern California. Arthur W. Anderson of the firm of Corlett and Anderson, Architects and Engineers, Oakland, was elected vice president; George A. Sedgwick, Structural Engineer with W. P. Day, and Harold O. Sjoberg, Structural Engineer with N. H. Sjoberg & Son, new Directors. The hold-over Directors are John A. Blume, retiring president, consulting Structural Engineer; Henry J. Degenkolb, Structural Engineer with John J. Gould, and John E. Rinne, Structural Engineer with Standard Oil of California, all of San Francisco.

JESSE ROSENWALD
President

Mr. Rosenwald graduated from the California School of Mechanical Arts, San Francisco, and later graduated from the College of Civil Engineering of the University of California at Berkeley in 1913. He has since continued in the field of Struc-

tural Engineering in the San Francisco area and has been connected with some of the largest industrial structures in the western states. He has been associated with some of the most prominent consulting engineers in this district and was for some years a partner in the firm of Maurice C. Couchot & Jesse Rosenwald. Rosenwald now maintains his own private consulting engineering office at 525 Market Street, San Francisco.

While in high school and continuing through University Rosenwald was an enthusiast athlete specializing in aquatic sports. He is married and has one daughter, Patricia, known as "Pat," and lives at 2348 Octavia Street, San Francisco. He has had a life time hobby of photography and is a member of the Photographic Society of San Francisco. He is Past Master of the Fidelity Masonic Lodge and a Shriner; and is also a member of the Concordia Argonaut Club, the Commonwealth Club of California, and the American Society of Civil Engineers.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

The regular meeing for January was devoted to installation of the new officers for 1949 with tentative committee appointments and other organization business being set aside to give Henry J. Brunnier ample time for an illustrated Story on the Fukui Earthquake Destruction.

Brunnier recently returned from Japan where he had an opportunity to study and observe the results of the earthquake.

* * *

Harmer E. Davis, Prof. of Civil Engineering at the University of California, serving as the acting director of the Institute of Transportation and Traffic, has recently issued a summary of the aims and functions of the Institute.

BUILDING DESIGN AND CONSTRUCTION

A course sequence for general contractors and persons in related engineering fields is being offered by the University Extension, UC, in Los Angeles, starting February 8th.

Subjects include "Construction Operation Analysis," "Building Codes," "Construction Costs and Estimating," "Advanced Construction Costs and Estimating," "Construction Supervision," "Practical Application of Law to the Construction Industry," and "Wood Technology."

ASSOCIATED GENERAL CONTRACTORS

Two new chapters have been chartered by the

ARCHITECT MOVES

The architectural offices of Chas. F. Dean have been moved to 1521 I Street in Sacramento, California.

MEMORIAL BUILDING

E. A. Hathaway & Company of San Jose have been awarded a general contract for the construction of a $48,839 Veterans' Memorial Building in Biggs (Butte County) for the Butte County Board of Supervisors. E. Geoffrey Bangs, San Francisco, is the architect.

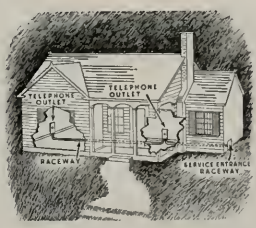
RESIDENCE

John C. Funk & Jos. A. Stein, architects, San Francisco, report the awarding of a contract to L. & E. Emanuel, Inc. for the construction of a 15-room house in San Francisco at a cost of $94,229. The residence will be of frame and stucco construction, three story and basement; elevator; and containing 5500 square feet.

ARCHITECT SELECTED

E. D. Cerruti, Architect, Oakland, has been selected as the architect for new poultry and livestock buildings to be built at the Alameda County Fairgrounds in Pleasanton, at an estimated cost of $135,000.

Where to place telephones for convenience, quiet, comfort



Plan for telephone service where the users will spend most of their time. It's wise to locate telephones away from busy halls and doorways where noise and distractions are greatest. And besure to plan a resting place for the telephone...and the user.

Modern home planning calls for extra outlets and built-in conduit. The cost of concealed wiring is small; customer-appreciation, great. For free help in planning, call your local Pacific Telephone office and ask for "Architects and Builders Service."

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

Colorful porcelain-enameled iron sheets are economically produced... simply and quickly installed... produce a distinctive, permanent, lightweight veneer for every type of building exterior. They are adaptable for interior application, too.

★ **WRITE TODAY** *for complete information and literature*

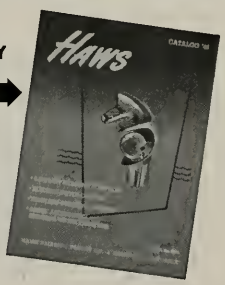
Lifetime PORCELAIN ENAMEL — PORCELAIN ENAMEL INSTITUTE, INC

★ **VENEER** ★ **PANELS**
★ **FLASHED-PANELS**
★ **SPECIAL SHAPES**

ARCHITECTURAL PORCELAIN CONSTRUCTORS
2827 UNION STREET • OAKLAND 8, CALIFORNIA
TELEPHONE TWINOAKS 3-5154

NEW *Haws* Catalog!

SEND FOR YOUR FREE COPY TODAY



The new HAWS Catalog ... showing the complete line of sanitary drinking fauntains of all types, electric water coolers, faucets and accessories **is now available!**

Write today for your copy. You can be sure of complete client satisfaction when you specify...

HAWS **ELECTRIC WATER COOLERS**
SANITARY DRINKING FOUNTAINS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

Associated General Contractors of America, one with headquarters at Anchorage, Alaska, known as The Alaska Chapter; and The Associated Building Contractors of New Mexico, with offices in Albuquerque. The national association now has 105 chapters, representing some 5,000 construction firms engaged in all types of construction.

R. H. Stock, of Stock and Grove, Inc., Anchorage has been elected president, and E. W. Dunn has been appointed manager of the Alaska chapter.

The New Mexico chapter will be headed by Gayle Armstrong of Roswell, New Mexico, while Alva J. Coats will serve as manager of the chapter.

HARRY W. BOLIN ELECTED PRESIDENT S.E.A. SOUTHERN CALIFORNIA

New officers were elected for the calendar year 1949 at the December meeting for the Structural Engineers Association of Southern California. Harry W. Bolin was elected president, Ernest C. Hillman, Jr., vice president, and Robert Short, secretary-treasurer.

HARRY W. BOLIN
President

New members of the Board of Directors will be L. K. Osborn, John G. Case and S. B. Barnes. Hold over directors are Don Shugart and Harold King.

Mr. Bolin was born in Michigan and lived in Wisconsin and Oregon before coming to California where he received his B.S. degree in Civil Engineering at the University of California in 1913. He has a very extensive and colorful background in the field of engineering. For ten years Bolin was associated with H. J. Brunnier of San Francisco serving in the various capacities from draftsman to principal assistant engineer. During the first World War he spent thirteen months in France with the 23rd Engineers. He was engaged in engineering work in Shanghai, China for two years. Mr. Bolin was structural engineer for Reed and Corlett in Oakland before entering his own business as consulting and structural engineer with offices also in Oakland. At the present time Bolin is the principal structural engineer in charge of the Los Angeles office, which includes eleven southern counties, of the State Division of Architecture. He has been with the Division of Architecture since the Southern California earthquake of 1933 when legislation (Field Bill) was enacted to control design and construction of public school buildings. However, since 1933 Bolin has taken special assignments in connection with the Eleventh Naval District of the United States Navy.

Bolin was a member of the Code Change Committee of P.C.B.O.C. for about eight years and has been active in code-work. He is a member of the A.S.C.E. and the American Concrete Institute.

Program for the evening consisted of a very informative address by E. S. McKittrick, president of E. S. McKittrick Company, General Contractors. Mr. McKittrick discussed the new developments in the various fields of construction and stressed the necessity for engineers and contractors remaining open minded in their approach to new materials and methods. Mr. McKittrick made suggestions for improving the relationship between the design engineer and the general contractor.

UC EXTENSION
LOS ANGELES

More than 100 engineering courses will be included in the new schedule of spring 1949 classes which University Extension, UC, announces for the Los Angeles area, according to Dr. L. M. K. Boelter, Dean of the U. C. L. A. College of Engineering and head of Engineering Extension.

The majority of classes will meet from 7 to 9 p.m. and will open beginning February 7th, at the University's metropolitan Los Angeles center.

Advance enrollment is available through University Extension offices.

CONSTRUCTION INDUSTRIES
EXPOSITION AND SHOW DATES

The fourth Annual Construction Industries Exposition and Home Show will be held in the Pan-Pacific Auditorium in Los Angeles from June 2 to 12.

Under the leadership of President Earl T. Heitschmidt and Executive Vice-President D. D. Durr, the Exposition's management has already laid plans to enlarge the affair for this year.

Last year more than 125,000 persons attended the Show seeking information about new tools, new materials and new ways of doing old jobs.

NATIONAL GUARD ARMORY

The Continental Construction Company of Sacramento have been awarded a $104,125 contract for the construction of a National Guard Armory Building in North Sacramento, California.

SCHOOL BONDS

The Anderson (California) Union High School District has voted $250,000 in bonds for the construction of an addition to the Anderson High School.

NEWSPAPER BUILDING. Geo. Lattin, contractor, is building a combination restaurant and newspaper building in Tracy (California).

These two new homes may look alike, but only one is MODERN—for only one has Certified Adequate Wiring which provides convenient, efficient electrical service for all demands of modern living.

The cost of installing Certified Adequate Wiring is a very small percentage of a home's over-all building cost, yet no other single expenditure will do more to keep that home up-to-date, insure high resale value and provide daily returns in better living.

Make sure each new home you design is modern—insist on Certified Adequate Wiring.

●

NORTHERN CALIFORNIA
ELECTRICAL BUREAU

1355 MARKET STREET SAN FRANCISCO 3

E. K. WOOD LUMBER CO.

SAN FRANCISCO General Offices: P. O. Box 1618, Oakland, Calif.
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● **PROTECTS AGAINST DECAY AND TERMITE ATTACK**

Specify it in your home
Available through Lumber Dealers

LOS ANGELES
601 W. 5th Street
Phone MIchigan 6294

SAN FRANCISCO
333 Montgomery Street
Phone DOugles 2-3883

J. H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.

HEADLINE NEWS AND VIEWS

By E. H. W.

A research Committee has been established by the California Redwood Association for the specific purpose of exploring the advisability of research projects for the California Redwood lumber industry, and for studies in utilization of scrap wood in mill and logging operations.

* * *

Many of the domestic glass enterprises established before 1800 failed because a large portion of the American people preferred foreign glass to the domestic product.

* * *

More than $600-million has been spent for construction of new hospitals and institutions for veterans and others since the end of the War.—Melvin H. Baker, Chm., Construction Industry Information Committee.

* * *

The Graybar Electric Company have announced construction of a new $750,000 office and warehouse building in San Francisco, with work to start immediately.

* * *

A record volume of new housing was put under construction during the first nine months of the year with more than 729,500 family units being started. —National Ass'n of Home Builders.

* * *

PRODUCTION of raw steel for the week of November 29th set an all-time record and represented an annual output of 94,076,000 tons, according to the American Iron and Steel Institute.

* * *

NEW construction in 1948 reached an estimated value of over 18-billion dollars, establishing a new dollar volume record for building activity.—U. S. Department of Commerce.

* * *

IN 1940 only 69.8% of all dwelling units in the United States had running water in the house, while in 1947 the number had risen to 78.3%.—U. S. Bureau of Census.

* * *

"TODAY'S houses and other buildings are more comfortable and more convenient and better suited to their functions than those of any other period in History."—Melvin H. Baker, Chm., Const. Ind. Info. Com.

* * *

AT LEAST $15,000,000 is being spent annually by the building industry on organized research to lower costs, develop new materials and promote faster construction, while another $1,500,000 is being spent by federal agencies and committees.

IN THE NEWS

PLANNERS MEET

Street and highway planners and builders will gather on the Berkeley campus of the University of California, January 31, February 1-2, for a discussion of current problems including such subjects as techniques for reducing congestion on city streets; city street lighting; use and effectiveness of city streets; county road organization; programming highways on basis of need, and the Collier-Burns Act and its impact on highway transportation in California.

ST. LOUIS HOME SHOW SCHEDULED

The annual Home Show of St. Louis will be held February 12-20, under auspices of the Home Builders Association of Greater St. Louis, according to an announcement by the Association.

Since its inception in 1935, the show has attracted wide interest and support.

GIRLS SCHOOL

Arthur Bros. of San Mateo have been awarded a $45,000 contract for the construction of a four classroom addition to the Girls Parochial School at Mission San Jose in Alameda county. Geo. J. Adams, Los Angeles, is the Architect.

SWIMMING POOL

Paddock Engineering Company, San Mateo, have been awarded a contract for the construction of a Swimming Pool at the 33rd District Agricultural Fair Grounds in Hollister, at an estimated cost of $28,423.

DOG KENNELS

The Marin County Humane Society have awarded a contract to the G. O. Construction Company of San Rafael for the construction of dog kennels in San Rafael at a cost of $13,300. F. Bourn Hayne of San Francisco is the Architect.

PAROCHIAL SCHOOL

The B & R Construction Company of San Francisco have been awarded a general contract for the construction of an 8-class-room, kindergarten, office, cafeteria and toilet, school at Martinez for the St. Catherine Parish.

J. Clarence Felciano of Santa Rosa, is the architect.

PRODUCERS' COUNCIL ELECTS OFFICERS FOR NEW YEAR

Don W. Lyon of the Libbey-Owens-Ford Glass Company was elected President of the Northern California Chapter of the Producers' Council, Inc., at the Annual meeting of the organization held in San Francisco on January 10th.

DON W. LYON
President

Other officers selected for the ensuing year included Herb C. Galitz, Elevator Division, Westinghouse Electric Corporation, Secretary; and A. J. MacJennett of the Mueller Brass Company, Treasurer.

An innovation was voted in streamlining Chapter organization by elimination of the office of Vice-President.

Induction ceremonies were conducted by retiring President J. A. Carlson, Kraftile Company. Reports were heard from the retiring officers and committee chairmen and an evening of fellowship enjoyed with prominent architects who were present at the formation of the Council Chapter eighteen years ago or who are officers in Bay Area architectural organizations at this time.

The Producers' Council is an organization of manufacturers of quality building materials and equipment which is affiliated with the American Institute of Architects for the purpose of improving data and technical services furnished by manufacturers to architects and engineers.

THIS SMART NEW STANLEY
Reg. U.S. Pat. Off.

Cabinet Hardware

adds so much to the beauty of a house yet so little to the cost!

Matching
Cabinet Door Pulls, Drawer Pulls and Hinges
in Gleaming Chrome

Solid Brass
Cabinet Hardware

For those who want the best

Write for full information

THE STANLEY WORKS • NEW BRITAIN, CONN.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNA

Dr. Irving P. Crick, noted meteorologist, spoke before the regular January meeting, inaugurating the first of a series of prominent speakers who will appear before the group under the program arranged by President Harry Bolin.

APPOINTED SALES DIRECTOR ASSOCIATED WOOD PRODUCTS

Perry E. West has been named director of sales promotion for the Associated Wood Products Company of California and Oregon, with general offices in Berkeley.

Well known in the architectural, structural engineering, and contracting fields, West was formerly division engineer for Timber Structures, Inc. His connection with Associated Wood Products follows closely opening of the firm's Portland, Oregon, branch under the management of Jack D. Godfrey.

ARCHITECTURAL SCHOLARSHIP

The New York Chapter of the A.I.A. is accepting applications for the annual LeBrun Traveling Scholarship competition which offers $2800 to the winner to be used for a trip outside the continental limits of the United States for at least six months. The trip to be used in the study of architecture.

Applicants must be nominated before January 21st, 1949, by a member of the A.I.A. Complete information may be obtained from the New York Chapter, A.I.A.

HIGH SCHOOL ADDITION

The Pacific Company of Oakland have been awarded a general contract for construction of a gymnasium and dressing room addition to the Jackson High School at a cost of $149,700. Chas. F. Dean, Sacramento is the architect.

MOTEL BUILDING. Robert R. Jones, Architect, Carmel (California) reports the awarding of a $72,000 contract to the Harold C. Geyer construction company for the building of a 14-unit Motel building near Carmel.

THEATER REMODEL. Architect O. A. Deichmann of San Francisco, is the architect on a $21,645 remodel of the Roseville Theatre. A. J. Hooper, San Francisco, is the contractor.

A. I. A. ACTIVITIES

(From Page 31)

pionship of French methods of thought and education."

In 1942, Dean Arnaud was named Ware Professor of the History of Architecture at Columbia and the following year served in South America as a visiting professor of architecture on a Carnegie Foundation fellowship. At present he is serving as vice chairman of the foreign relations committee of the American Institute of Architecture.

SOUTHERN CALIFORNIA CHAPTER

An official Chapter Roster has been issued containing the name, address, and term of each individual membership. The list represents a substantial number of Architects now affiliated with the Chapter and the A.I.A.

* * *

The Job-referral Program adopted by the Chapter about a year ago has proven to be a successful endeavor and beneficial to both the architects and those seeking architectural services. In order to render an even greater service the Service Program has been revised and will function on a self supporting basis in the near future.

* * *

The December meeting was the 481st meeting of the Chapter and was attended by 104 architects, who heard Gilbert Morris, superintendent of the Los Angeles Department of Building and Safety, speak on the proposed City Ordinance which would require the strengthening or removal of parapet walls and architectural appendages or ornaments over public buildings. Morris declared the Ordinance is also under consideration by the Structural Engineers and the Construction Industries Committee of the Los Angeles Chamber of Commerce.

Approval of the principles of the Ordinance were accepted, however, the Chapter reserved approval of the measure until the exact wording has been further considered.

* * *

NEW MEMBERS of the Chapter include: William Cody, Stewart Granger, Kenneth Johnson, Norman Pedersen, Arthur E. Mann, William T. Strange, and Herbert Stegman. New Junior Associates include Jerry P. Braveman, Robert M. Hernandez, Ruby Palmer, and Howard R. Lane.

The January meeting will be devoted to the installation of new officers for 1949.

U. S. ARCHITECTURE IN AUSTRALIA

More than 10,000 people have seen the "America Today" architectural exhibition currently show-

SO MUCH HOT WATER — 20 30 40

SO FAST — 40 GALLONS PER HOUR

IN SO SMALL A SPACE — 14¼" 16¼" 18¼"

THE *Continental* GLADIATOR

QUEEN SIZE *in beauty—*
KING SIZE *in performance*

Engineering ingenuity has put everything in this sized heater to meet the rigid tests of the American Gas Association.

Slim and beautiful for the modern home, with the new plus features for complete safety and peak performance.

One of a new complete line designed to conserve space.

Check the size YOUR HOUSEHOLD NEEDS
STORAGE TANK CAPACITY GUIDE

Number Bathrooms	Number Bedrooms	Storage Cap. Gallons
1	1 or 2	30
1	3 or 4	40
2	2 or 3	40
2	4 or 5	50
3	3	50
3 or 4	4 or 5	75

Approved by American Gas Association, Inc.

Continental
WATER HEATER COMPANY LTD.
1801 Pasadena Avenue Los Angeles 31, California

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.
SAN FRANCISCO, CALIF. HEMLOCK 4100

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco - DO 8311

ing in Sydney, Australia, at the David Jones mid-city galleries.

The exhibition has also been shown in Melbourne and Adelaide and will go from Sydney to Brisbane, being sponsored by the New South Wales Chapter of the Royal Australian Institute of Architects and the Australian-American Association.

Apart from small homes and cottages, rural homes, and large homes, the collection includes schools, guest houses, commercial, and public buildings, and because of the similarity in climate between the West Coast of America and Australia, the display is stimulating considerable interest among government housing officials and the public.

Contributors to the exhibit include: Pietro Belluschi, Architect, Portland; Mario Corbett, Architect, San Francisco; Gardner A. Dailey, Architect, San Francisco; Harwell H. Harris, Architect, Los Angeles; and Wurster, Bernardi and Emmons, Architects, San Francisco.

SAN FRANCISCO ARCHITECTURAL CLUB

The San Francisco Architectural Club, discontinued during the late War, has been re-activated and recently announced a wide variety of activities relating to the architectural profession.

Since its foundation in 1901, many well-known architects have received their initial training in participation in the Beaux Arts Institute of Design, architectural problems, as well as monthly discussions and lectures, rounded out with seminars. At the present a Seminar in Structural Engineering is being conducted by C. Jefferson Sly, San Francisco engineer.

Other subjects considered include building materials, new products, new methods and design.

Officers elected to serve during 1949 are: Wm. E. Cowell, President; Harry Nakahara, Vice-President; A. Kirkivold, Secretary; and Wm. C. Thieleman, Treasurer. Directors include Marshall McDonald, Archibold Taylor, and Robert Boyce.

* * *

The Class "C" Problem for January is to be a "Roadside Greenhouse and Nursery" given by Charles D. Church, Landscape Architect. The Class A Problem is "A Concert Hall" given by Sven Markalins, and the Class B Problem is "A Shopping Group" with the problem being given by Victor Gruen of Hollywood.

BEAUX-ARTS INSTITUTE OF DESIGN SCHOLARSHIP

Due to the present unsettled conditions, the Committee on Scholarships has decided to continue a

(See Page 43)

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$60.00 to $90.00 per M, truckload lots, delivered.

Cartage—Approx. $9.00 per M.

BUILDING PAPER—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.80 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.

Sash weights, cast iron, $100.00 ton.

Nails, $5.50 base.

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.94
Crushed Rock, ¾" to 1½"	2.38	3.13
Roofing Gravel	2.81	3.50
River Sand	2.50	3.06
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.02 per bbl. f.o.b. car; delivered $3.60.

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Meduse White — 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Meduse Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. 3/16"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

25/32 x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

25/32 x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

25/32" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .40 per □ ft.
Double Strength Window Glass	.60 per □ ft.
Plate Glass, under 75 sq. ft.	1.50 per □ ft.
Polished Wire Plate Glass	2.25 per □ ft.
Rgh. Wire Glass	.60 per □ ft.
Obscure Glass	.40 per □ ft.

Glazing of above is additional.

Glass Blocks.....$2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness (3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common ..... $85.00 per M
No. 2 Common ..... 83.00 per M
Select O. P. Common ..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	18c to 20c per ft.
Plyscord	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$13.00 per square; No. 2, $10.50; No. 3, $9.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—Tapered: ½" to ¾" x 25"—$17.00 per square.
Resawn: ¾" to 1¼" x 25"—$22.00 per square
Average cost to lay shakes,— 8.00 per square

MILLWORK—Standerd.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

MARBLE—(See Dealers)

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine ..... $1.85 per gal. in 5-gal. cont.
Raw Linseed Oil ..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil ..... $3.23 per gal. in drums.
Boiled Linsed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. conteiners.
Use Replacement Oil ..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hat roll channels metal lath (lathed only)	3.00
Seilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅜"—29c per sq. yd.

Composition Stucco—$4.00 sq. yerd (applied).

PLUMBING—

From $175.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standerd" ter end gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less then 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
Redwood Shingles, $15.00 per squere in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ..... $18.25 square
5/8 x 16"—#1 Cedar Shingles, 5" Exposure ..... $18.00 square
4/2 #1-24" Royal Shingles, 7½" Exposure ..... $23.00 square
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resewn Cedar Shakes, 10" Exposure $24.00
¾ to 1¼ x 25" Resawn Ceder Shakes, 10" Exposure $29.00
1 x 25" Resewn Ceder Shakes, 10" Exposure 22.00

Above prices are for shakes in place.

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glezed)

Copper, $1.25 sq. ft. (flat).
Galvenized iron, 65c sq. ft. (flat).
Vented hip skylights 90c sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill.
$270 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.70 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$1.85 per sq. ft.
Asphalt Tile Floor ⅛" x 9" —$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12 ..... $1.25 sq. ft.
4 x 6 x 12 ..... 1.50 sq. ft.
2 x 8 x 16 ..... 1.45 sq. ft.
4 x 8 x 16 ..... 1.75 sq. ft.

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—

60c per squere foot, $5 for ventilators.

A. I. A. ACTIVITIES

(From Page 40)

special program for the Lloyd Warren Scholarship (36th Paris Prize) following the one formulated in 1947. The purpose is for architectural study and travel over a period of 18 consecutive months, with one year study in France and other European countries, and the remainder in a survey of important architectural and engineering projects in the United States.

The amount of the scholarship is $5,000.

WASHINGTON STATE CHAPTER

The first meeting of 1949 was devoted to a discussion of Seattle's COMPREHENSIVE PLAN by John D. Spaeth, Jr., director of planning, who outlined many of the problems being faced by the City's "growing pains."

* * *

The annual Christmas Party was another success, according to Chuck Pearson, who reports that plans should be made now to be sure and attend the 1949 event.

* * *

TACOMA. E. N. Dugan has been elected President of the Tacoma Society for the ensuing year. Other officers elected at the recent annual meeting included: P. G. Ball, vice president; Lyle Swedberg, secretary-treasurer.

Efforts are being made to put the Civic Center project back on the ballot as soon as possible.

* * *

At the halfway point the Naramore, Bain, Brady, Johanson, team number two is leading the Architects' Bowling League with a commanding lead of one point. The Stuart & Durham team is second, and Harmon, Pray, Detrich & Shorett rate third position.

* * *

NEW MEMBERS: Frederick F. Bassetti, Galen W. Bentley and Leslie H. Peterson have been elected Corporate Members. Associates include Thomas E. Dunstan, J. Hays Faulk and Harry N. Roberts.

JUDGES SELECTED FOR NEIGHBORHOOD CONTEST

Judges to determine the best neighborhood planning in America as submitted in the 1948 Neighborhood Development Contest conducted by the National Association of Home Builders, have been announced.

BUILDING TRADES WAGE (JOB SITES) NORTHERN AND CENTRAL CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U.S. Department of Labor. (Revised to November 1, 1948.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Marin	Sacramento	Santa Clara	San Mateo	Solano	Stockton	Watson-ville
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	2.81¼	3.00	2.81¼	2.81¼	2.05*	3.00
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.25	2.00	1.75	2.25	2.25	1.60*	2.25
CARPENTERS	2.16	2.16	2.12½	2.12½	2.16	2.12½	2.12½	2.16	2.12½	2.12½	2.12½
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.25
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
ENGINEERS: MATERIAL HOIST	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½
PILE DRIVER	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.52½	1.42½	1.52½	1.52½	1.52½	1.42½
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.52½	1.42½	1.52½	1.52½	1.52½	1.42½
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.81¼	2.00*	2.50*	2.81¼	2.81¼	2.81¼	2.50*
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.25*	2.25*	2.50*	2.81¼	3.00
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.00*	2.00*	2.25*	2.16	2.50
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
ROOFERS	2.16	2.16	2.16	1.87½	2.16	2.00	2.00	2.16	2.16	2.25	2.25
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.12½	2.12½
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81¼	2.81¼	2.81¼	2.81¼	2.05*	2.81¼
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.67	2.00	2.67½	2.67½	2.67½	2.43¾	2.67½

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:
CENTRAL CALIFORNIA CHAPTER, ASSOCIATD GENERAL CONTRACTORS OF AMERICA
with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

CONSTRUCTION ENGINEER (CIVIL)
GENERAL SUPERINTENDENT
PROJECT MANAGER

Twenty five years of wide practical experience on frame, steel, concrete and masonry bldgs. of all types. Estimating, sub-division, sales, detailing & specification writing background. Dependable, energetic. Excellent local references. Have car. Free to travel. P.O. Box 807, San Mateo, Calif.

WANTED: Product Engineer with experience wanted as a permanent addition to the staff of an industrial Development Department located in Minnesota. Work involves product development including travel for consumer contacts. Program relates to products from wood. Submit details education, experience, references, salary requirement, photograph. All replies considered confidential and will be acknowledged. Reply Box 238, Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

ENGRAVING—Good engravings are essential to a satisfactory job of printing reproduction. For the best, see Poor Richard Photo Engraving Co., 324 Commercial St., San Francisco.

PHOTOGRAPHY: Building, Construction, Publicity, Aerial photographs by thoroughly experienced Photographers. Black & White, Color, Stills and Motion Pictures. DE8 Photos, 929 Hearst Building, San Francisco.

TERRAZZO
for Floors and Wainscoting in Hospitals, Theaters, Hotels, Office Buildings, Schools and Stores.
DECORATIVE • DURABLE • SANITARY
FOX TILE CO.
3247 E. 14th Street, Oakland
Phone: ANdover 1-0431

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

Chairman of the national awards panel is Major General U. S. Grant III USA (RET); Franklin D. Richards, Commissioner of FHA; Hugh Prather, Dallas, Texas, land developer, and Miles L. Colean, architect and consulting economist.

Five classes of entries are to be judged, and awards will be made at the NAHB Convention and Home Builders Exposition in Chicago on February 17-24.

EAST BAY ASSOCIATION OF ARCHITECTS

The December meeting was devoted to the spirit of the holidays as well as architectural business, with songs from the "Orinda Barber Shop Quartet," emphasizing the spirit of Christmas and the New Year.

* * *

A discussion of "Lower School Costs" at an informal gathering of architects, State Department of Finance, California State Department of School House Planning, and representative of the cities of Oakland and Berkeley developed the need for establishing certain standards of construction and planning that would result in costs of school construction without reduction in school house quality.

Among those attending the conference were: Doyt Early, architect of the State Department of School House Planning; William Hess, School Division of the Local Allocations Board; Edward Hussey, of the Berkeley Schools; Charles Wilton of the Oakland School Board; and EBAA members, Russell Guerne De Lappe, Oscar Price, Hans Ostwald, George Hanna, William Rice, George Downs, Herbert Johnson, and Robert Williams.

INSTITUTE OF DESIGN SPRING SEMESTER

The Institute of Design in Chicago has announced that qualified students are now being enrolled for Spring Semester which opens February 7th, in the degree courses of architecture, industrial design, and visual design and photography.

Course description is available from the Institute in Chicago.

EXTENSION COURSES UC AT LOS ANGELES

. Courses in Construction supervision, architectural drawing, building codes, contemporary architectural design, construction costs, and estimating, and the Los Angeles Building Code are being offered in the University of California Extension Division in Los Angeles.

Classes for the most part will meet at 1027 Wilshire Blvd., starting February 7th.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

DESIGN FOR WELDING. Published by The James F. Lincoln Arc Welding Foundation, Cleveland, Ohio. Price $2.00, postage prepaid in U. S. $2.50 elsewhere.

A significant record of 1000 pages, profusely illustrated with photographs, drawings, tables and cost data, of the progress of arc welding during the postwar years, the book is composed of abstracts of 82 award papers in the recent Foundation "Design-for-Progress" Award Program.

Edited by Prof. R. S. Green, acting chairman of the Department of Welding Engineering of the Ohio State University, "DESIGN FOR WELDING" has been prepared to show a record of representative welded designs, costs, and present trends in developing welding as applied to a wide variety of industries and uses.

Assisting Prof. Green were associate editors Prof. Douglas C. Williams and Prof. Charles B. Smith of Ohio State University, and numerous consulting editors chosen from industry.

MATHEMATICS AT WORK. By Holbrook L. Horton. Published by Industrial Press, 148 Lafayette St., New York 13. Price $6.00.

A working manual for machine designers, tool engineers, gage designers, mechanical draftsmen, technical and trade school students and teachers.

The practical applications of arithmetic, algebra, geometry, trigonometry, and logarithms are shown by 196 drawings and diagrams in the 728 pages of the book.

Mechanical problems taken from actual practice are presented in an easy-to-follow, step-by-step way to show (1) what the problem is about; (2) how to analyze it and develop a method of attack and solution; (3) what formula is required; (4) how this formula is derived; and (5) how a typical example is worked out.

A reference section is included as is a section devoted to mathematical tables.

BOWLING ALLEY

C. J. Shinn of Richmond (California) has been awarded a $117,000 contract for the construction of a bowling alley building in Vallejo. Eric Peterson, El Cerrito, is the Engineer.

COUNTY HOSPITAL ADDITION

The Harris Construction Company have been awarded a $334,102 contract for the construction of a Maternity and Records wing to the Fresno County General Hospital at Fresno, California. Philip S. Burkingham, Fresno, is the architect.

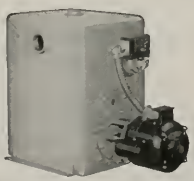
The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer

REPUBLIC STEEL

See Sweet's Catalog File or write us for full information.

REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO
DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. S-0687
304 Bryant Street, Palo Alta
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Las Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT
Pumping Machinery for Every Purpose

For Service Call DOuglas 2-6794 or MUtual 8322
SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers
of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834

IN THE NEWS

ARCHITECT SELECTED

D. D. Stone & Lou Mulloy, architects of San Francisco, have been selected to develop a Community Hospital for the Eden Township Hospital District, Alameda county, California.

PROMOTED

John D. McCrystle has been named assistant to the president of the Upson Company, according to an announcement by W. H. Upson, Jr., company president.

McCrystle has been serving the paper, textile and plastics industries as management consultant with offices in New York. He is widely known as an authority on fibres and fibre processes.

CONTINUOUS HINGE

A new piano type continuous hinge of solid brass metal, in two finishes Polished Brass and Polished Chrome, has been announced by the STANLEY WORKS of New Britain, Connecticut.

The hinges are in retail lengths of 4 inches each and two widths 1-1/16" and 1¼" open measurements. Attractively packed with screws; for boat hatches, tables, desks, tool chests, sewing cabinets.

SCHOOL BONDS APPROVED

Voters of Redding (California) have approved the issuance of $1,680,500 in school bonds for the construction of a new Junior College and additions to the High School.

Chas. F. Dean, Sacramento, is the architect.

RICHMOND WAREHOUSE

The Parr Terminal Company of Richmond have awarded a $104,000 contract to the W. C. Tait Company of San Francisco for the construction of a Cotton warehouse in Richmond.

APPOINTED WESTERN MANAGER

Edward A. Altshuler has been appointed western manager for the Prest Glass Corporation of New York with headquarters in Los Angeles, according to a recent company announcement.

Altshuler's duties will consist of establishing distributors among lumber, glass, and building specialty suppliers for the company's new fiberglass building and decorative material.

FIRM EXPANDS

Wilson & Geo. Meyer & Company, Pacific Coast distributors of Eastman Kodak Company products is constructing a $150,000 warehouse and office building to serve its customers in southern California, Arizona, Utah, Colorado and New Mexico.

Located in the heart of the Los Angeles central manufacturing district the new building will contain 10,200 suare feet of floor space of which 3,000 will be used for offices to accommodate a staff of 15 people.

APARTMENT BUILDINGS

The Metropolitan Life Insurance Company of New York have applied to the City and County of San Francisco for a permit to construct 11 apartment buildings in the Park Merced district at a cost of $2,186,222 each.

sound control surveys made without obligation

Gold Bond
SOUND CONTROL PRODUCTS
Made by National Gypsum Company

SOUND CONDITIONING FOR:
SCHOOLS . OFFICES
AUDITORIUMS . HOTELS
RESTAURANTS . THEATRES
HOSPITALS . FACTORIES

Whether your problem is the elimination of noise or the scientific acoustical treatment of interiors to provide better hearing conditions, we can recommend the type of installation and materials best suited for the job. A 'phone call will arrange a consultation at your convenience without cost or obligation.

VAN ARSDALE-HARRIS CO.
ENGINEERS & CONTRACTORS
Distributors
595 Fifth Street
San Francisco
EXbrook 2-4404

NAILOCK
ACOUSTI LOCK BOARD
ACOUSTI-CELOTEX
...the Latest and Best System of Installing Suspended Ceilings for Acoustical Treatment

Yes, CABOT'S STAINS
Give Natural Beauty
To any design in any site
Colors that Stay True
A Superior Wood Preserver
Cost 1/3 as much as good paint
GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

WESTERN ASBESTOS COMPANY
Distributors · Engineers · Contractors
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

STATIONERY
SCHOOL & OFFICE SUPPLIES
•
Printing Engraving
Announcements
•
CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

Fine ENGRAVINGS
POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO, 11

Each apartment building will be 13-stories in height and of reinforced concrete construction. Starrett Bros. & Elken, Inc. of San Francisco are the general contractors.

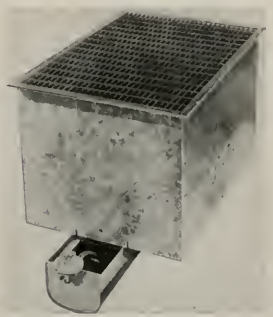
COUNCIL

Methods of construction, other than conventional, will headline the program for the Small Homes Council's fourth annual Short Course in residential construction for builders and contractors which is scheduled for the University of Illinois campus February 3 and 4.

Speakers will include Richard Jones, Sylvester Snyder, and Donald C. Perkins.

FLAT FLOOR FURNACE

A new flat-type floor furnace with 57,000 BTU input for natural, manufactured or liquefied petroleum gas has been announced by the HOLLY MANUFACTURING CO. of Pasadena, California.



It requires no basement or pit; is suspended from floor with all operating parts housed in watertight pan which is easily removed for service, and is constructed and designed to obtain a maximum of heat distribution over entire face of furnace.

TB HOSPITAL

The County of San Mateo is working on plans for the construction of a 100-bed Tuberculosis Hospital to be built near Belmont at a cost of $1,500,000. D. D. Stone & Lou Mulloy of San Francisco are the architects.

NEW GRAMMAR SCHOOL at Martinez, Calif., will cost $346,406, according to Bamberger & Reid, San Francisco architects. Construction by B & R Construction Company.

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING • PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard
Interior Trim — Gutters
Special Moldings

The place to SAVE
is
LUMBER MANUFACTURING CO.
225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

Subscribe Now —
ARCHITECT and ENGINEER
$3.00 Per Year

PITTSBURGH TESTING LABORATORY
ENGINEERS AND CHEMISTS
Testing and Inspection of Concrete, Steel and Other Structural Materials
Design of Concrete Mixes
Offices in all principal cities
651 Howard St., San Francisco 5
EXbrook 2-1747

Index to Advertisers

ANGIER Pacific Corp.... *
ARCHITECTURAL Porcelain Constructors ... 34
ARCHITECTS Reports ... 40

BASALT Rock Company. ... *
BAXTER & Company, J. H. ... 36
BURKE, W. S. & Co. ... *

CLASSIFIED Advertising ... 43
CENTER Stationery ... 47
CLINTON Construction Company ... 44
CONTINENTAL Water Heater Co. ... 39

DETROIT Steel Products Co. ... 2
DINWIDDLE Construction Co. ... 47
DUFFY Tile Co. ... 48

FIREBRICK Constuction Co., J. N. J. *
FORDERER Cornice Works ... 40
FOX Tile Co. ... 44
FULLER, W. P. Co. ... *

GLADDING, McBean & Co. ... *
GUNN, Carle & Company ... 46

HANKS, Inc., Abbott A. ... 48
HAWS Drinking Faucet Company ... 34
HERRICK Iron Works ... 47
HOGAN Lumber Company ... 44
HUNT, Robert W., Company ... 48
HUNTER, Thos. B. ... 47

JOHNSON, S. T. Co. ... *
JUDSON, Pacific-Murphy Corp. ... 40

KRAFTILE Company ... 31

LUMBER Manufacturing Co. ... 48

MARBLE Institute of America ... 5
MATTOCK, A. F. Co. ... 48
MICHEL & Pfeffer Iron Works ... Inside Front Cover
MULLEN Mfg. Co. ... 47

NORTHERN California Electric Bureau ... 35

PACIFIC Coast Gas Association ... 1
PACIFIC Manufacturing Company ... 45
PACIFIC Portland Cement Company ... Back Cover
PACIFIC Telephone & Telegraph Co. 33
PITTSBURGH Testing Laboratory ... 48
POOR Richard Engraving Co. ... 47

REMILLARD-Dandini Co. ... 48
REPUBLIC Steel Corporation ... 45

SCOTT Co. ... 47
SECURITY Valve Company ... 32
SIMONDS Machinery Company ... 45
SIMPSON Logging Co. ... *
SISALKRAFT Company ... 44
SMOOT-Holman Co. ... 37
SOULE Steel Co. ... *
STANLEY Works, The ... 38
SUPERIOR Fireplace Company ... *

TAYLOR Co., Halsey W. ... *
TORMEY Company, The ... 47

U. S. BONDS ... Inside Back Cover

VAN Arsdale-Harris Co. ... 46
VERMONT Marble Company ... 45

WESIX Company ... *
WESTERN Asbestos Co. ... 46
WOOD, E. K. Lumber Company ... 36

*Indicates Alternate Months

Robert W. Hunt Company
ENGINEERS
Inspection · Tests · Consultation
Schools and Other Structures Are Built as Designed
When Construction Materials are Inspected at point of Manufacture and during Erection by
ROBERT W. HUNT COMPANY
Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories
Chicago - New York - Pittsburgh
Los Angeles - All Large Cities
San Francisco, 251 Kearny Street

REMILLARD-DANDINI Co.
Brick and Masonry Products
★
400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

TILE CONTRACTORS
Shower Doors, Tub Enclosures
Medicine Cabinets
INSTALLATIONS OF EVERY DESCRIPTION
Modernizing - Repairing
DUFFY TILE CO.
253 Minna St., S. F. YUkon 6-1489

ABBOT A. HANKS, INC.
Engineers & Chemists
INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •
TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS
624 Sacramento Street, San Francisco

ARCHITECT AND ENGINEER

PUBLIC LIBRARY
FEB 25 1940
PERIODICAL DEPT.

FEBRUARY 1940

THIS IS HARD

BUT THIS IS EASY

AND THIS IS MIGHTY WONDERFUL

SURE, you believe in saving.

But it's mighty hard to make yourself take cash out of your pocket, and time out of your day, to do it regularly.

The sure way, the *easy* way to do your saving is to get started on an *automatic* savings plan with U. S. Savings Bonds. Like this . . .

1. **If you're on a payroll,** sign up in the Payroll Savings Plan, then forget it. From then on the money saves itself—so much per week, or so much per month.

2. **If you're not on a payroll,** sign up at your bank for the Bond-A-Month Plan. Equally easy. You decide how much you want to put into bonds every month, your bank does the rest.

In just ten years after you start buying bonds, your money starts coming back to you—well-fattened! Every $3 you invest today brings you back $4 to make possible all the wonderful things you dream of doing.

And remember—any time you need your money for emergencies, you can get it back in minutes, without losing interest.

Automatic saving is sure saving—U.S. Savings Bonds

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

• ARCHITECT AND ENGINEER

Vol. 176 No. 2

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

The new MIRROR building in Los Angeles is a fitting tribute and monument to the pioneer southern California newspaper family—The Chandlers, owners and publishers of the great Los Angeles Times and now the new tabloid MIRROR. (See Page 14)

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

FEBRUARY

EDITORIAL NOTES 2

NEWS & COMMENT ON ART 4

THE OLDER WORKER IN THE BUILDING INDUSTRY 7
By DR. W. SCHWEISHEIMER

INTERNATIONAL AIRPORT AUTO SUBWAY IS LARGE ENGINEERING PROJECT 9

UNITED STATES NAVY ORDNANCE AND OPTICAL BUILDING, Hunters Point 10

THE MIRROR BUILDING, Los Angeles 14
ROLAND H. CRAWFORD, Architect

IN THE NEWS 30, 34, 37, 38, 46

A. I. A. ACTIVITIES 31

WITH THE ENGINEERS 32

HEADLINE NEWS & VIEWS 36

ESTIMATOR'S GUIDE, Building and Construction Materials 41

BUILDING TRADES WAGE SCALES, Northern & Central California . . . 43

BOOK REVIEWS, Pamphlets and Catalogues 45

INDEX TO ADVERTISERS 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office. Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

. EDITORIAL NOTES .

EDITORIAL NOTES

"FOUR out of every five houses built in 1947 were bought by families with incomes of less than $5,000 per year. Half of these were bought by families with $3,000 or less income per year."—The Federal Reserve Board.

• • •

FACT SHOULD COUNT

As Congress prepares to debate the President's public housing program and explores the possibility of inaugurating one of the most Socialistic policies ever to confront a private industry, it is quite clear that convincing facts of the home building industry's ability to provide necessary housing must be produced.

It is facts that will count with members of Congress and their constituents at home . . . facts about production — facts about prices — facts about the number of veterans housed—facts about the value in the houses reaching the market today — facts about the avalanche of housing that has poured out of the production lines of home builders everywhere—facts that prove homes have been built in record breaking volume for all income levels in this country—facts that private builders operating in a free American economy have built more houses in 36 months than the world ever before has seen—facts that show the middle and lower income families have bought most of the houses produced—and facts that it is unnecessary for the government to build housing for its people.

If the true state of affairs can be presented and will be received upon their face value members of Congress and the public will reject any plan for government-built, tax-supported, publicly subsidized housing.

• • •

ALTHOUGH more Americans have obtained new homes since the war than in any other period in the history of the nation, they paid out less for housing than for any other necessity of life.

BUY YOUR NEW HOME NOW

"The best investment an American family can make in today's market is the purchase of a new home", says Milton J. Brock, who as President of the National Association of Home Builders, may be somewhat prejudiced but on the other hand should be in a position to know whereof he speaks.

The idea that it is wise to hold off buying a new house in hope of a decline in prices is not based so much on authentic information as it is on wishful thinking.

As a matter of fact, many basic commodities which go into the construction of a home have again started upward, and the apparent fourth round of wage increases in basic industries, is bound to be reflected in the increased costs of a new home. The Bureau of Labor Statistics recently forecast an increase in construction costs generally in 1949, and at the same time forcast that production would remain in high volume.

The most important reason why homes will always be a good investment for any family is the steady demand for new homes which comes from several sources.

First there is the upward trend in total size of our population. Second, there is the ever increasing number of new families which are formed by marriage each year; Third, there is the matter of families which are now doubled up, many of which are coming into the new house market with savings that have been put aside for ample down payments on the home of their choice. Then there is the normal loss of houses due to flood, fire and obsolescence.

Owning a home is distinctly an advantage of living in America as nowhere in the world are so many homes privately owned as in the United States.

EXHIBITIONS: 50 great Photographs from the Museum of Modern Art's Collection; and William Blake's "Book of Job," from February 7 to 28th.

The Oregon Guild of Painters and Sculptors exhibit will be shown from February 15 to March 15; while the Children's Gallery will be open on February 15th.

BEAUX-ARTS CONTEST WINNERS ANNOUNCED

William P. Craig, ex-air corps pilot now studying at the University of Illinois, has been announced as winner of a national design contest sponsored by the Beaux-Arts Institute of Design in cooperation with the Tile Council of America.

Second place went to Carl R. Kohler, student at Pennsylvania State College; Joan R. Lam, University of Pennsylvania was third, and Robert D. Warner of the University of Illinois was awarded fourth place.

The contest called for designs for an elementary school and kindergarden building in which special attention was given to the use of clay tile. More than 360 students from 14 schools throughout the United States submitted entries.

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., director of the California Palace of the Legion of Honor, Lincoln Park, San Francisco, has announced the following schedule of exhibitions and special events for February:

EXHIBITIONS: The Museum's Contemporary American Acquisitions; Thirteen Watercolorists; Sculpture of the 19th and 20th Centuries; Ghosts Along the Mississippi, Opening February 15; Music and Musicians, Opening February 7.

EDUCATIONAL ACTIVITIES: Art classes for children, ages 4 through 15, each Saturday at 10:00 a.m. Conducted by Katharine L. Parker and Lilly Weil Jaffe.

Painting class for adults, each Saturday at 2:00 p.m. Instruction by Frank Lobell.

Gallery tours each Wednesday and Friday at 2:30 p.m. Conducted by Katharine L. Parker and Lilly Weil Jaffe.

ORGAN PROGRAMS: Organ program by Uda Waldrop every Saturday and Sunday, 3 p.m.

FREE MOTION PICTURES—2:30 p.m. Saturday. Admission Free.

* * *

The photographic exhibition "Music and Musicians," presents the work of Philippe Halsman, Yousof Karsh, Gjon Mili, Fred Plaut, Adrian Siegel, and Eugene W. Smith, and ranges from carefully planned and executed studio setup to the amateur's candid camera. The exhibition was prepared and shown in New York by the Museum of Modern Art's Department of Photography, of which Edward Steichen is director.

* * *

The "Ghosts Along the Mississippi" exhibit comprises seventy-five original prepared photographs by Clarence Laughlin.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center has announced the following Exhibitions and events for the month of February.

EXHIBITIONS: Design in the Kitchen; Paintings by Robert McChesney, Byron Randall, James Corbett, and Emmy Lou Packard; Paintings by Leonard Edmondson, John Kwok, and Julius Engel; 68th Annual Exhibition Oil, Tempera and Sculpture of the San Francisco Art Association, starting February 20th; Paintings by James Fitzgerald and Sculpture by Margaret Kassler; In and Out of Focus, a Museum of Modern Art Exhibition; and Photographs by James Fitzsimmons.

* * *

"Design in the Kitchen" is the first of a series of four spring exhibitions which will explore the field of good design for household objects, furniture and interior decoration materials. Three special kitchen designs have been created by Bay Region architects, Clarence Mahew, Campbell and Wong, and Fred Langhorst. Each of the three kitchens focus on the new and unique idea of an appropriate artist designed wallpaper, a new kind of functional kitchen cabinet, and colored kitchen equipment.

* * *

Members of the Decorative Arts Committee who have made the exhibitions possible under Mrs. Ferdinand C. Smith, chairman, are: Miss Dulcina Baer, Miss Barbara Dorn, Mrs. Dean B. McNealy, Mrs. Francis Elkins, Mrs. Eldridge T. Spencer, Mrs. Jerd Sullivan, Mr. Richard B. Freeman, Mr. Lou Banks, Mr. Bill Brewer, Mr. James Kemble Mills, Mr. Clarence Mahew, and Mr. Worley Wong.

CALIFORNIA SCHOOL OF FINE ARTS

The California School of Fine Arts, 800 Chestnut Street, San Francisco, opened its Spring Term on February 7th, with a curriculum of day and night

classes in painting, sculpture, graphis arts, design for commerce and industry and photography.

Courses in Elementary and Life Drawing, Sculpture and Construction, Painting, Ceramics and Advertising Art will be taught by Elmer Bischoff, Richard Diebenkorn, Antonio Sotomayor, Claire Falkenstein, William Gaw, David Park, Whitney Atchley, and Allen Peare.

Classes in Interior design, Jewelry Design, Film Workshop, and Stage Design and Set Construction will be taught by Maurice Sands, Franz Bergmann, Sidney Peterson, and Arch Lauterer respectively.

Children's art classes became available on February 12th to youngsters between the ages of 6 and 10, under the direction of Jeanne Kewell and are held each Saturday morning from 9 to 12 o'clock. Other courses for children in the 11 to 16 group will be conducted at the same time by Ruth Cravath Wakefield.

* * *

The San Francisco Women Artists have granted scholarships at the California School of Fine Arts to two youngsters of San Francisco, Robert Maas and Isabel Shaskan, both 11 years old. They will commence their training at the Art School with the start of the Spring Term.

ART LEAGUE OF CALIFORNIA

An exhibition of Portraits and Still Life by Thomas C. Leighton, Canadian Portrait Painter, is being shown at the Art League of California at 582 California Street, San Francisco.

Mr. Leighton, now a member of the ART LEAGUE staff, has for some years been considered one of the finest painters in the Eastern States and in Canada where his paintings have appeared in numerous one-man shows and in leading galleries. A portrait of Zilba George, the opera singer, held first place in the Royal Canadian Academy Exhibition in the Art Gallery of Toronto, Canada, last fall. His work had a special showing for the King and Queen of England during their Canadian visit.

SCHOLASTIC ART AWARDS TO HIGH SCHOOL STUDENTS

THE ART LEAGUE OF CALIFORNIA announced that two (4 year) scholarships to their school are offered in the 1949 Scholastic Magazine Awards.

The Scholastic Art Awards sponsored by schools and firms throughout the nation have long been a factor for the development of creative talent. Conducted for more than two decades through the Scholastic Magazine, the awards have been extended to creative work in Writing, Music, Photography, and the Industrial Arts as well as in Art.

High School Seniors interested in these allied fields should submit entries through their schools no later than February 12. All California Art work will be entered in the Regional Exhibition to be held at the Emporium, San Francisco, and the winning work sent to Pittsburgh, Pennsylvania, to compete in the National Exhibition at the Fine Arts Galleries of Carnegie Institute.

ALBERT M. BENDER GRANTS-IN-AID

Announcement is made by the Board of Trustees of the Albert M. Bender Memorial Trust that applications for the Bender Grants-in-Aid for the current year will be accepted **up to February 25.**

Four grants will be awarded, two in art and two in literature, each grant carrying a stipend of $1200. All work must be delivered to the San Francisco Art Association, 800 Chestnut Street, on March **2** Between the hours of 9:00 a.m. and 5:00 p.m.

The grants, presented annually as a memorial to the late art patron, are intended for those wishing to engage in creative work in art or literature who need financial assistance. Applications in the field of art are limited to painting and sculpture. Grants are awarded without restriction as to race, color or creed; all applicants must have resided in central or northern California for at least two years.

The following will serve on the Juries of Awards: Jury in Art—Franz W. Bergmann, Richard C. Diebenkorn, Jr., John Haley, Zygmund Sazevich and Neil Sinton; Jury in Literature—Joseph Henry Jackson, Literary Editor, S. F. Chronicle, and Professors Josephine Miles of the University of California, Elizabeth Pope of Mills College, and Wallace Stegner of Stanford University.

Application forms and further information may be obtained by contacting the Art Association.

NORTHERN CALIFORNIA RESEARCH CONFERENCE

Dudley E. Chambers, executive Engineer of General Electric Research Laboratories, spoke before the January 12th meeting of the Northern California Research Conference on the subject "Problems in the Industrial Applications of Atomic Energy".

Chambers outlined the important factors determining the widespread use of atomic energy and the steps that must be taken to realize its long term possibilities.

The Older Worker In The Building Industry

By Dr. W. Schweisheimer

The older worker is a growing problem in the building industry as well as in any other branch of industry. There is a compelling reason for this development; People, on the average, live longer today, in fact nearly ten years longer than people twenty years ago, and about twenty years longer than people at the turn of the century. We are becoming a "nation of elders."

Extension of the average life has produced important changes in the structure of the population. The following table shows the relative proportions of various age groups in the United States, today and immediately before the first World War.

Age Group	1914	1947
Under 24	47.9%	41.7%
25 — 44	30.8	30.2
45 — 64	16.4	20.7
65 — 74	3.4	5.1
75 and up	1.5	2.3

This shift to an increasingly higher percentage of people over 45 years of age is still more obvious from figures published by Dr. L. I. Dublin, statistician of the Metropolitan Life Insurance Company. In 1900, only one-fifth of the population was 45 years of age or over; by 1940 the proportion had increased to more than one-quarter of the total. This trend will continue for many decades, Dublin says. By 1960 almost one-third of the population of the United States will be 45 years or more of age, and by the end of the century two-fifths of the people will be in that category.

Better Health for Builders and Roofers

A study by Dublin and Vane shows that recent health figures for workers in the building industry are comparatively good. The figures for principal diseases of heart, blood vessels and kidneys are 95 per cent for roofers and slaters when compared with the average figure of 100 among all occupied males, ages 15 to 64,—and 88 per cent for masons, 105 per cent for builders and building contractors. The corresponding percentages for tuberculosis are 72 for builders and building contractors, and 107 for masons (no figures mentioned for roofers). Distinctly higher are accident figures for the building industry with 217 per cent for roofers and slaters, 171 for builders and building contractors and 137 for masons.

Despite the fact that people live longer today, they age less quickly, they are longer efficient than in former days. The chronological age is not the same as the functional age, all experts agree; the former is measured in years and months, the latter in skill and productivity. Dr. Ross Armstrong McFarland, Professor at Harvard Medical School, has compared the industrial efficiency of older and younger workers.

Older workers, he stated, have at least as good a production record as younger workers. In a sample group of 1,500 workers those rated "excellent" averaged over 47 in age, while "inferior" workers had an average of only 41 years.

The building industry in all its branches: builders and building contractors, masons, roofers, building wreckers, painters, etc., today has more older workers proportionally than at any time. Will these older men work as hard and as efficient as younger workers?

The answer is yes. Their productivity will be equal to that of younger men. They may have certain physical defects in individual cases, but when certain qualities diminish, other increase.

On the liability side of older workers are less ability to do heavy work, defects in health, inability to learn new things, certain slowness and greater severity of accidents.

On the positive side are the older worker's skill and experience, his patience and sobriety, loyalty, less absenteeism and fewer accidents, endurance for routinized work and better morale. Physical

weaknesses in older workers are, on the average, more than compensated by their skill and experience. A survey of the New York State Legislative Committee on Problems of the Aged found that industry rates older workers more loyal, more liable and productive than their juniors.

"Older Workers Are Slower"—a Prejudice

The notion that older workers are slower, is dismissed by Dr. McFarland as largely prejudice. What those men may have lost in physical strength and quickness of reflexes, he says, they more than make up in greater physical endurance and skill. Many older workers have slight defects in hearing or eyesight, but individuals vary greatly. In a group in their fifties, a quarter had keener vision than the average man in his twenties. At the age of 60, a test of 8,400 employees showed as high a percentage were able to pass the test as were those in their twenties.

On most mental tests, McFarland showed, older workers do as well as younger ones. Memory for recent events is apparently not quite so sharp while details of more remote facts are well remembered. Older workers rate just as high in reasoning and critical judgment and learning ability. Insight for meanings, recognition of generalized truths and critical judgment are not impaired to the end of their life span. Older workers are more stable, since their family responsibilities and settled habits cut down on labor turnover. They change their job less often.

Fewer Accidents of Older Workers

Contrary to a common opinion, older workers have far fewer accidents,—though their accidents are more severe if they occur. The older worker is less of an accident risk than the younger worker. One study showed that a special group over 60 suffered half as many accidents as those in their twenties. Even as truck and automobile drivers, older workers (up to 60) were safer.

According to a study by Kossoris men between the ages of 40 and 54 have accident rates two-thirds as high as workers under 21. The rate for workers aged 60 and over was lower than for those under 21 and about the same as for those between 21 and 29 years of age. Only when working in high environmental temperatures, older men have more accidents than younger men. This condition hardly ever applies to men in the building industry. N. W. Shock comes to this conclusion: The diminished accident rate for older workers more than counterbalances the longer healing period so that, in general, it may be concluded that older men have proved less expensive from the standpoint of accident cost than younger men.

Skilled Worker Beyond Forty

In the Harvard Fatigue Laboratory it has been stated that "there is little reason for taking the position as a ground for action that in general men over 45 years of age are less effective than others in industrial occupations. "We hear from employment offices that many employers are not interested in workers past 45 or even 40 years of age. This originates from an antiquated prejudice which should be checked by facts and statistical figures. The skilled worker is well beyond forty, he is all important to industry.

Proper food is important for keeping the older worker healthy and efficient. Dr. Tuohy, Duluth, sees the competence of healthy older people largely as a matter of proper nutrition. A checkup of food habits is recommended, bad food habits will diminish the efficiency of older workers.

There will be a time of crisis for every worker when he sees the end of importance to his work which was his life for many years. Show him, Dr. Giberson says, that he is not a failure and that his experience and judgment are of value to the industrial society. Dr. Carlson, in a report to the Congress on Industrial Health, emphasized this angle.

By enforced idleness of the increasing army of older workers in our midst we are forging a dangerously weak link, he says, in the large part of society whose experience, wisdom and relative unselfishness could guide those with less experience and wisdom. Enforced idleness among older workers is devastating to the worker himself and an obvious objective damage to industrial productivity.

LUMBERMEN'S ASSOCIATION ISSUE NEW BOOKLET

The West Coast Lumbermen's Association has issued a membership directory entitled "Where To Buy". The newest edition reflects the constant progress of the West Coast lumber industry toward providing dependable industrial and home construction lumber to meet the demand.

Listings include lumber and wood pipe manufacturers, loggers, timber fabricators and treators; and capacity, facilities, species and lumber items manufactured, and wood conserving by products.

GYMNASIUM BUILDING

Chas. G. Haun of Santa Rosa has been awarded a $49,588 general contract for the construction of a Gymnasium Building for the Laytonville High School in Mendocino County. The building is to be of frame and stucco construction.

Norman R. Coulter, San Francisco, is the architect and C. A. Caulkins of Santa Rosa has been selected as the supervising architect.

AN Air France Constellation taxies over the world's first roadway underpass built to permit the simultaneous movement of aircraft and surface vehicles at New York's Internotional Airport. The Port of New York Authority Photo.

INTERNATIONAL AIRPORT AUTO SUBWAY IS LARGE ENGINEERING PROJECT

The first underpass in the world over which planes can taxi, has been opened at New York's International Airport, Idlewild, Queens. It is said to be the world's first underpass for carrying vehicular traffic while giant commercial aircraft move overhead. It makes possible for the first time the simultaneous movement of planes and automobiles.

The one-and-a-half-mile concrete underpass which stretches from the terminal area of the 4,900-acre airport to Sunrise Highway, Southern Parkway and 140th Street, is an extension of the Van Wyck Expressway. The expressway is scheduled for completion some time in 1950. The completion of the $4,250,000 parkway and its unique underpass marks another milestone in the development of the New York International Airport which is supposed to gain greatest importance in the near future.

Howard S. Cullman, chairman of the Port of New York Authority, operator of the field, described the parkway as being of the most modern design and construction, with a landscaped island running its

(See page 35)

UNITED STATES NAVY
ORDNANCE and OPTICAL BUILDING
HUNTERS POINT, CALIFORNIA

ARCHITECT: Ernest J. Kump

STRUCTURAL ENGINEER: Mark Falk

Dedication of the new six-story U. S. Navy Ordnance and Optical Shop Building at Hunters Point, San Francisco, opened for Navy use a $2,500,000 modern structure containing many inovations in engineering and architectural design as far as precedent in Navy buildings is concerned.

As the building rests on filled ground, pilings were driven below ground level to a distance of 111 feet, equal to the height of the six story roof. Concrete columns support the multi-storied side commencing with a diameter of 38 inches and taper at each successive floor to a diameter of 24 inches of the fifth floor. These column pillars are centered every 25 feet and have a strength of 3,750 pounds per square inch. The concrete slab floors are 10 inches thick.

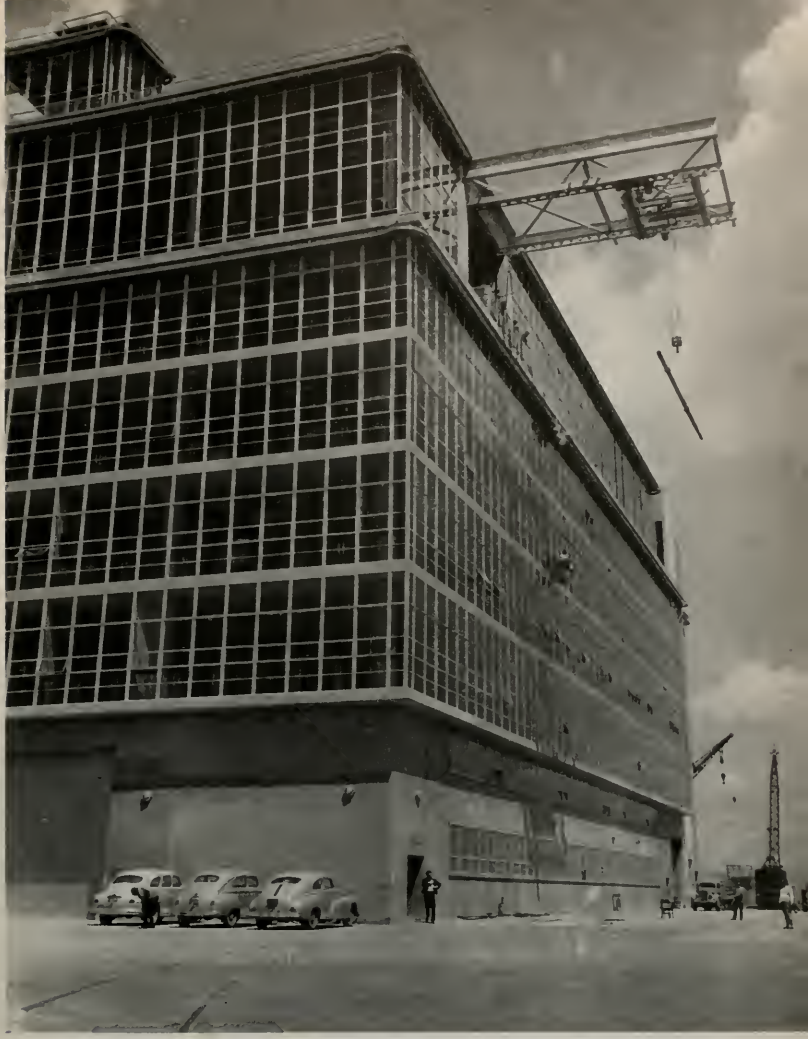
Nearly two acres of exterior heat absorbing glass provide the interior of the building with a high degree of luminousity allowing work to be carried on at all times of the day without artificial illumination.

The building is divided into two sections—a

AT LEFT: Details of one side of ordnance repair shop.

RIGHT: Same area showing complete distribution of light.

Photo's U. S. Navy



OVERHANGING monorail crane hoisting submarine periscope to sixth floor Optical Shop for calibration and repairs. (Note electric driven bos'n's chairs in use by window washers.

shop crane unit on the north which is 151 x 227 ft. divided into two 75 foot bays. The south bay rises 42 feet to the bottom of the third floor extension.

Heavy ordnance and other equipment must be moved about easily so each floor is equipped with cranes, lifts, hoists, or monorails for that purpose.

The Shop Crane Bay, devoted to ordnance repair work, has two 30-ton bridge cranes, two bridge cranes of 20-ton capacity, four 10-ton bridge cranes, and 65 one-ton jib cranes. Each floor has monorails for chain hoists as well as two to four bridge cranes.

DETAILS OF GLASS ROOF

Extending out of the south side of the building at the sixth floor level is a 39-foot outrigger crane boom capable of a 15-ton lift for the hoisting of periscopes and range finders from the railroad tracks below. The periscopes are lifted into the periscope tower which rises 41 feet above the sixth floor roof. By sighting on known points in the bay tests are conducted on the accuracy of the periscope readings.

Another feature is the escalator in the industrial building which operates from the Shop Crane Bay to the third floor extension, a rise of 42 feet.

The electrical work in the building represents two systems: (1) A complete circuit of interconnected power busways located along the ceilings and at waist level around the sides of each floor. (2) For

SUPPORT COLUMNS on third floor. Utilities distribution — waist high panel running around perimeter of work area — and overhead monorail crane system for servicing electronics repair benches.

separate lighting, telephones and power, there is an under-floor wiring system of duct runs and conduits laid at the time the floor slabs were poured. In addition to power and lighting, there is a complete fire alarm circuit, a communications circuit, and a gong and gong relay circuit.

The windows, reaching from the second floor to the roof, were especially designed by the manufacturer to meet this type of architectural design, and are of Ariston semi-intermediate all steel. A feature of this type of steel window frame is that it has a project-out ventilation.

The building was approximately two years in construction.

ELECTRICAL LIVING INSTITUTE STARTS

An Electrical Living Institute, a course of 15 weekly meetings covering the entire subject of electricity in the home, began Wednesday, January 26, 7 to 9 p.m. in the P. G. & E. Auditorium, 245 Market Street, San Francisco, under the joint sponsorship of the Adult Division-San Francisco Public Schools (Marina Adult School), Northern California Electrical Bureau, Pacific Coast Electrical Association and the Pacific Gas and Electric Company.

Given in response to many requests for up-to-date information on new developments and trends in electrical living, the course covers the field from the fundamentals of how electricity is made to studies and demonstrations of individual appliances and equipment for living comfort and convenience.

The course is free, except in the case where college credit (2 units) is desired, when a fee of $6.00 is charged.

Lectures were designed particularly for teachers, home economists, architects, builders, contractors, interior decorators and radio and newspaper women interested in home lighting and electrical appliances. Speakers were well-known authorities in their field.

ARCHITECTS FORM NEW FRESNO FIRM

H. Rafael Lake and Elso B. DiLuck, architects, have announced their association for the general practice of architecture.

Offices have been established in the Patterson Building, Fresno, California.

A. C. Horn Company New West Coast Unit

The new West Coast manufacturing unit of the A. C. Horn Company, which is a division of the Sun Chemical Corporation, is now in full operation on a six acre tract at 7237 East Gage Avenue, Los Angeles, with Pacific Coast activities under direction of Fred Sumner, general manager. Offices of the Company, which started as a small paint manufacturing plant in New York City in 1897, are also located on the West Coast in San Francisco, Los Angeles, and Seattle, Washington.

The Company now manufactures caulking and glazing compounds, roofing products, floor materials, waterproofings, dampproofings, interior and exterior paints and technical compounds and specialties specified by architects, engineers and contractors.

Photo's
JULIUS SHULMAN

SCULPTURED FIGURES — Central Pylon, Spring Street

THE MIRROR BUILDING

Los Angeles, California

ARCHITECT: ROWLAND H. CRAWFORD, Beverly Hills

STRUCTURAL & MECHANICAL ENGINEERS: HOLMES and NARVER, Los Angeles

CONSTRUCTOR: P. J. WALKER COMPANY, Los Angeles

SPRING

Street

Elevation

East

THE MIRROR BUILDING . . .

Across the skyline of Metropolitan Los Angeles The Mirror Building now stands at the corner of Second and Spring Streets with triumphant dignity. Completed the latter part of last year it is the new home of The Mirror, afternoon tabloid newspaper, launched to fill a great need in the City of the Angels by that City's pioneer newspaper family, the Chandlers.

Characterized by simplicity of design the building is noteworthy in many respects. The Architect, who also made additions and alterations to the Los Angeles Times Building and the Composing Room, Press Room and Concourse now connecting the Old and New Buildings, wisely integrated The Mirror Building into the scheme of the Existing Buildings. As carefully, however, as it is woven into the fabric of the whole, one is awed by the strength of design felt in the beauty and forthrightness of this new modern structure. It occupies an area of 120x165 feet and is ten floors in height. The three basements and first five floors are being used for the publishing of the paper, and the upper five floors have been leased for office space and at the expiration of the leases will be converted for future expansion of the newspaper.

The Building is of steel frame construction. Exterior walls are concrete faced with a light buff colored Indiana limestone. Granite and bronze have been used with reservation in the trim on the ground floor and extruded aluminum has been used on the upper floors.

THE MIRROR BUILDING
Los Angeles, California

The following firms, participants in the construction of the new Mirror Building, have display advertisements in this issue:

ARCHITECT: Rowland H. Crawford

STRUCTURAL & MECHANICAL ENGINEER: Holmes & Narver

GENERAL CONTRACTOR: P. J. Walker Co.

ACOUSTI-CELOTEX: The Harold E. Shugart Co., Inc.

LIGHTING: Sunbeam Lighting Co.

PLUMBING & HEATING: Howe Brothers

AIR CONDITIONING: Western Air and Refrigeration, Inc.

On the front of the building on Spring Street the predominant vertical character of the central motif is flanked by horizontal fenestration, and the unusual treatment of the countless horizontal windows on the Second Street side is veritably breathtaking. The vertical windows on the front of the Building carry the eye upward to the magnificent

SECOND

Street

Truck

Entrance

sculptured figures which stand high above the passing throng. These figures represent various phases of life with which the great daily paper is concerned in the dissemination of news. From the Second and Spring Street corner of the Building they symbolize respectively — Culture, Justice, Faith, Progress and Equality. Faith, as the central figure of the group, is the most important and holds fast the scroll representing the religious heritage of mankind expressed in freedom of worship. Tracing the development of these figures is of interest. Designed by the Architect in Beverly Hills, California, sketches of these figures one quarter full size were forwarded to the modeler, Eugene Romeo, in Chicago, Illinois. There they were modeled in clay. Architect Crawford then went East to consult in

LOOKING West On Second Street

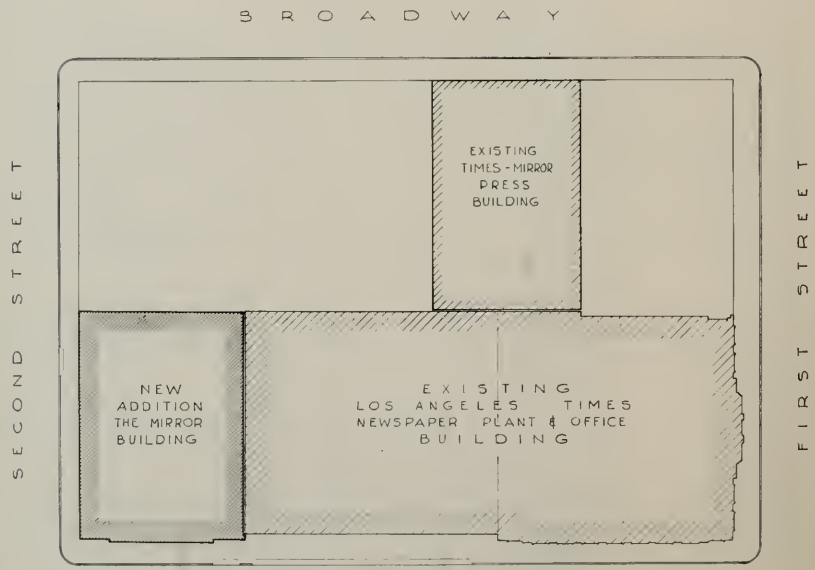
the final modeling, after which the models were cast in plaster and sent to the Indiana Limestone Company in Bedford, Indiana for the guidance of the stone carvers. It was in Bedford that the actual final full size stone carving of the figures was executed.

From the very impressive Entrance to the Building large Herculite glass doors open into the spaciousness of the Main Lobby. Here the floors are of Roman travertine with Red Arkansas marble base and the walls are of Botticino marble with bronze trim. Ceilings are of plaster with indirect lighting from metal coves.

The Elevator Lobby and Public Space for telephoning, information, and classified ads placement are finished of the same materials as the Main Lobby. There are four pasenger elevators to the upper floors from the Elevator Lobby. On the Second Street side near the Truck and Employees Entrance is the freight elevator serving all upper floors and the three Basements.

The Sub-basement handles the switchboards, compressors and other mechanical equipment as well as having Locker Room facilities for janitors and elevator operators. The Second Basement or Storage Basement is comprised of a Carpentry and Paint Shop with storage space for the office portion of the Building. The First Basement has a Reel Room and Ink Storage for the Presses. The balance of this area is devoted to paper storage.

Besides the various Lobbies which have been mentioned, the Concourse, Press Room, and a



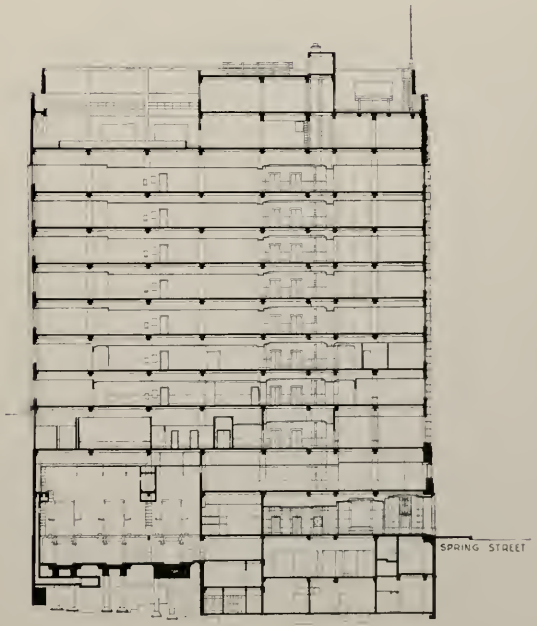
PLOT PLAN

LEFT:

The new composing room is an addition to the existing Los Angeles Times Building.

LIGHTING IS THE BEST

The newly constructed addition to the Los Angeles Times newspaper building is illuminated throughout by the latest scientifically designed fixtures, including the popular surface type.



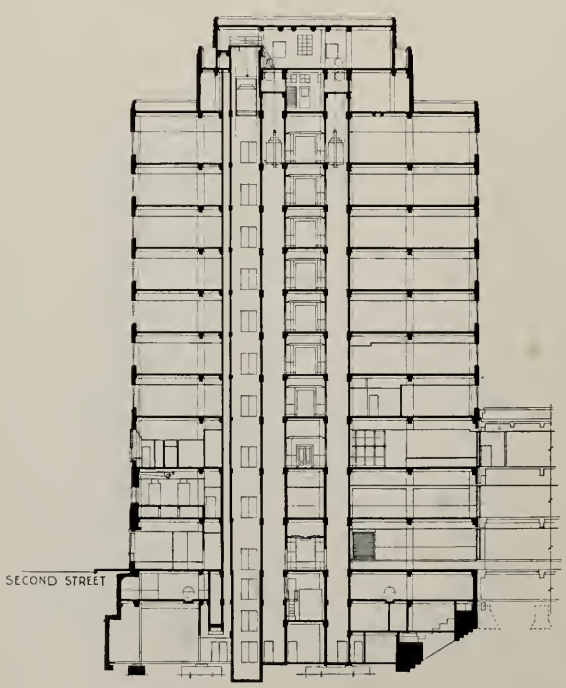
LONGITUDINAL SECTION

VIEW AT RIGHT

Is Section from Second Street side.

RIGHT:

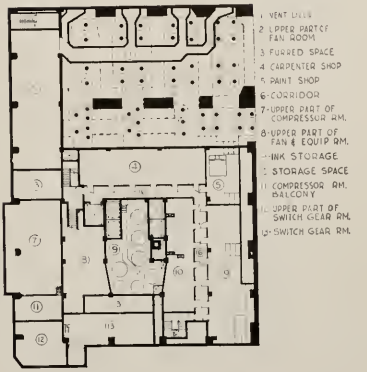
Public lobby on the First floor looking towards the service counter.



CROSS SECTION

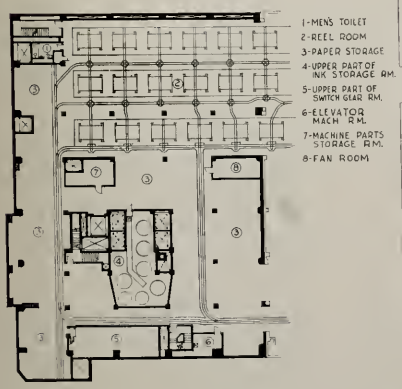
SECTION
From Spring Street side.

SUB-BASEMENT FLOOR PLAN

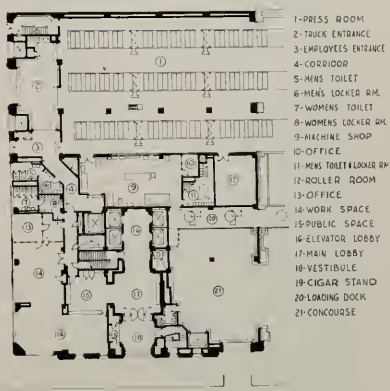


STORAGE - BASEMENT FLOOR PLAN

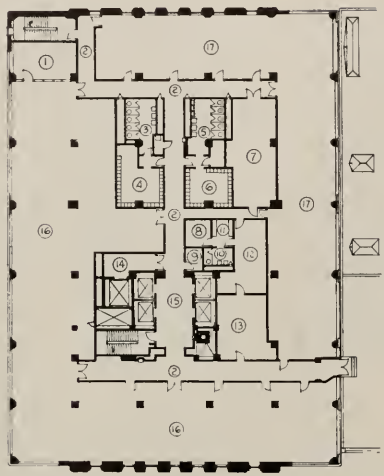
Machine Shop are also situated on the First Floor. On the Second Floor are found the Mailing Room, Control Room, Electrical Shop and a Spectator's Balcony running around the upper portion of the Press Room. Many of the functions and activities of the paper take place on the Third floor. The City Room, Editor's Office, and Editorial Work Areas for Sports, Finance, Women's Activities, etc. are located on this floor. Here is also found one of the most modern photographic departments of any newspaper in the world. Careful consideration was given to this department because of the emphasis



BASEMENT FLOOR PLAN

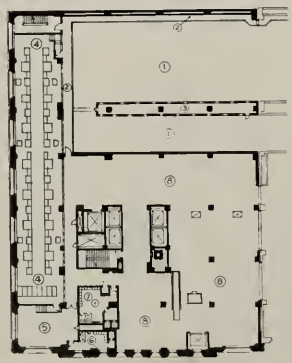


FIRST FLOOR PLAN



1-OFFICE
2-CORRIDOR
3-WOMEN'S TOILET
4-WOMENS LOCKER RM.
5-MEN'S TOILET
6-MEN'S LOCKER RM.
7-FAN ROOM
8-REST ROOM
9-JANITOR'S STORAGE
10-TOILET
11-LOCKER ROOM
12-SWITCHBOARD RM.
13-TELEPHONE EQUIP RM.
14-SERVICE CORRIDOR
15-ELEVATOR LOBBY
16-CIRCULATION DEPARTMENT
17-WORK SPACE

FOURTH FLOOR PLAN

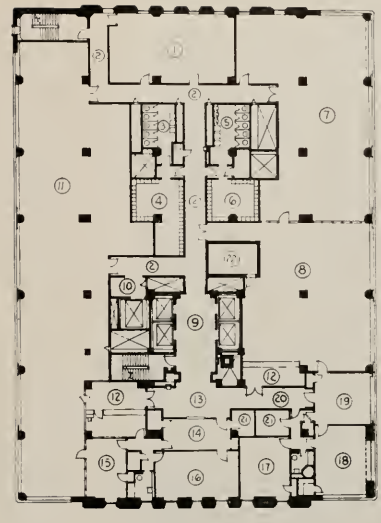


1-UPPER PART OF PRESS ROOM
2-SPECTATORS BALCONY
3-DUCT SPACE
4-CONTROL ROOM
5-ELECTRIC SHOP
6-ELECTRICIANS TOILET & LOCKER ROOM
7-MAILER'S TOILET & LOCKER ROOM
8-MAILING ROOM

SECOND FLOOR PLAN

1-WOMEN'S DEPT.
2-WOMENS LOCKER RM
3-WOMENS TOILET
4-COLOR (DARK) ROOM
5-DRESSING ROOM
6-CHEMICAL MIXING ROOM
7-VAULT
8-STUDIO
9-LIBRARY
10-ART DEPT.
11-PHOTO. ROOM
12-CAMERA STORAGE
13-FINISHING ROOM
14-DARK ROOM
15-STORAGE
16-FAN ROOM
17-CORRIDOR
18-EDITOR & PUBLISHER
19-RECEPTION ROOM
20-SERVICE LOBBY
21-ELEVATOR LOBBY
22-INTERVIEW ROOM
23-PRESS ASSOCIATION
24-WIRE ROOM
25-MEN'S TOILET
26-MEN'S LOCKER RM
27-MANAGING EDITOR
28-ASSIST EDITOR
29-CONFERENCE RM.
30-CITY ROOM
31-SPORT DEPT.
32-SPORTS EDITOR

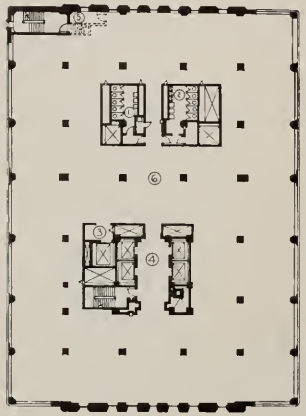
THIRD FLOOR PLAN



1-DISPLAY ROOM
2-CORRIDOR
3-WOMEN'S TOILET
4-WOMEN'S LOCKER RM.
5-MEN'S TOILET
6-MEN'S LOCKER RM.
7-WORK SPACE
8-ACCOUNTING & AUDITING DEPT.
9-ELEVATOR LOBBY
10-SERVICE LOBBY
11-ADVERTISING DEPT.
12-PUBLIC SPACE
13-RECEPTION LOBBY
14-RECEPTION ROOM
15-ASSIST. ADVERTISING MANAGER
16-ADVERTISING MANAGER
17-ASSIST. BUSINESS MANAGER
18-BUSINESS MANAGER
19-RECEPTION ROOM
20-PASSAGE
21-FILING ROOM
22-VAULT

FIFTH FLOOR PLAN

PHOTOGRAPHIC DEPARTMENT — View Into Typical Dark Room



TYPICAL FLOOR PLAN
SIXTH TO TENTH FLOOR INCL.

placed on the photographic phase of The Mirror. An attractive Studio and Dressing Room have been provided and there are eleven Dark Rooms, which include one for color work. There is a Mixing Room for all of the developers. The developer is piped to the Dark Rooms. A Belt Conveyer runs between the Dark Rooms to carry the photographs down to the Finishing Room which is equipped with automatic dryers.

The Fourth Floor provides expansion for the Third and Fifth Floors. And the Fifth Floor itself is used for Advertising, the Executive Office of the Business Manager, and the Accounting and Promotion Departments.

Throughout the Building in the Work Areas and Offices ceilings are acousti-celotex and floors are ¼" Oak Parquet. Typical Corri-

PRESS CONTROL ROOM—Second Floor

EDITORIAL Reception Room and Entrance from Elevator Area Third Floor.

dors and Elevator Lobbies on the different floors have warm beige and terra-cotta color terrazzo floors with marble border and base of Red Arkansas marble with wainscot of a beige Roman travertine.

The skill and vision of the Architect and Engineers has been shown thru the ingenuity and sound judgment with which the many requirements of the project were solved.

There was the solution for the Presses which required head-room three stories high. Above the space they occupy, building columns are supported on heavy plate girders.

Inasmuch as the lower floors are used almost entirely for machinery for production of the newspaper, the heavy equipment such as that for air conditioning and the cooling tower is in a Pent house on the top of the Building. Because of this situation and to abide with a new City Building Code, the horizontal force carried at roof level is 1,500,000 lb. and at the third floor level this load is 2,670,000 lb.

ACOUSTI-CELOTEX

Sound-Absorbing Tile Ceilings

INSTALLED IN THE NEW

TIMES-MIRROR BUILDING

BY

THE HAROLD E. SHUGART COMPANY, INC.

Acoustical Engineers and Contractors

911 North Sycamore Avenue

Los Angeles 38, California

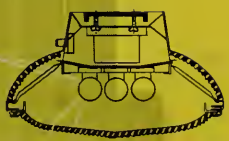
Hollywood 9-8261

THE MIRROR BUILDING . . .

PRESS ROOM:

Nothing is more fascinating than the giant press of a metropolitan newspaper. Here is the new Mirror presses as seen from the specially designed spectators gallery.

SUNBEAM'S *"light distribution control"* at work.



Installed throughout the new LOS ANGELES TIMES building, are 3000 of SUNBEAM'S 8080 series fluorescent fixtures. These units are providing high level *controlled* illumination by means of their Holophane "*controlens*" elements. A SUNBEAM exclusive here in the west, "*controlens*" equipped fixtures are typical examples of SUNBEAM'S "*controlled light distribution*" equipment.

SUNBEAM LIGHTING COMPANY • 777 E. 14th PLACE • LOS ANGELES 21, CALIFORNIA

OUR CONGRATULATIONS

TO THE TIMES-MIRROR COMPANY

FOR ITS LATEST CONTRIBUTION

TO THE BUILDING OF THE WEST,

THE —

MIRROR BUILDING

AND WITH PARDONABLE PRIDE

WE APPRECIATE THEIR

CONTINUING CONFIDENCE IN

CHOOSING FOR ITS CONSTRUCTION

THE —

P. J. WALKER COMPANY

Builders

ESTABLISHED 1895

PUBLIC space off the Lobby on the main first floor

Telephone booths in rear and at extreme right is entrance to elevators.

WE ARE PLEASED TO HAVE BEEN ASSOCIATED IN THE CONSTRUCTION OF THE MIRROR BUILDING IN CONNECTION WITH THE INSTALLATION OF ITS PLUMBING AND HEATING.

HOWE BROTHERS

Plumbing and Heating

Established 1877

"The oldest plumbing and heating firm in Southern California."

1198 So. San Pedro Street
Los Angeles 15, California
J. C. NETZ, Owner Phone PRospect 7246

"THE FIRM THAT KNOWS HOW-E"

In calculating the effect of such horizontal forces, attention was given to the difference in period of seismic vibration in the three separate buildings which are here grouped and interconnected. To take care of these differences, earthquake joints were used between the three structures—where physical contact was necessary, provision was made for a slip-joint so that movement of one structure in response to seismic forces could not be transmitted to the framework of the adjoining building.

A central type air-conditioning system is included for the entire office space as well as for the printing departments.

Functional requirements and aesthetic values were given special consideration in the design of high intensity lighting not only in the Press Room and Composing Room, but throughout the entire Building. Lighting intensity runs from thirty-five and forty-five main-

PUBLISHER'S OFFICE:

Designed far the busy executive who seeks simplicity, ample lighting and convenience in handling a great multitude of publication matters.

tained foot candles in all the Work Rooms and Office Areas up to ninety-five to one hundred ten maintained foot candles in some of the Mechanical Departments. Glass in the lower portion of the windows is Solex, glare and heat reducing and the Prismatic glass blocks in the upper portion of the windows reflects the light upward —further eliminating the glare of the sun and providing natural light deeper into the Work Areas.

In all there is an area of 251,000 square feet. But as one considers the various factors and functions of the new Mirror Building they readily fade into the background and one remains conscious of a feeling of deep inspiration and that this Building will be a living tribute to all that reflects the noblest purposes of freedom and mankind. Gratitude belongs to all who so earnestly cooperated in its execution.

Air Conditioning *Refrigeration*

WESTERN AIR

AND

REFRIGERATION, INC.

AIR CONDITIONING CONTRACTORS

NEW MIRROR BUILDING

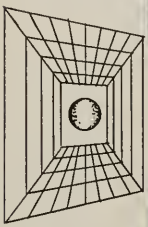
—:—

OLympic 1117

1819 GLENDALE BLVD. **LOS ANGELES**

It Pays to Plan Lighting at the Drawing Board the MILLER Way

IT PAYS — because, besides providing the good lighting required, Miller Fluorescent Troffer Lighting Systems are a definite structural aid..."CEILINGS UNLIMITED".* IT PAYS—because installation is simplified by Miller patented Ceiling Furring Hanger.



Miller lighting service is all inclusive. It covers the needs of planned commercial and industrial lighting. Miller field engineers and distributors, conveniently located are at your call.

THE miller COMPANY
SINCE 1894
ILLUMINATING DIVISION, MERIDEN, CONNECTICUT

*Reg. Trademark U. S. Pat. Off.

Recognized Everywhere!

IT'S HAWS FOR HIGHEST QUALITY

- Best Materials
- Finest Workmanship
- Trouble-free Valves and Fittings
- Complete Sanitation

Write today for '49 HAWS Catalog. Specify HAWS—and be sure!

HAWS SANITARY DRINKING FOUNTAINS
ELECTRIC WATER COOLERS

HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

IN THE NEWS

ELECTED TO BOARD FULLER COMPANY

A. H. Brawner, president of the W. P. Fuller & Company, has announced the election of W. P. Fuller III to the directorate of the Company.

W. P. Fuller III
Director

Fuller, a great grandson of the founder of the Company is manager of the firm's Glass Division and in charge of labor relations. He is the son of W. P. Fuller, Jr. who served as president of the company from 1924 to 1946, and is the first member of the fourth generation of the Fuller family in California to serve on the Board.

A graduate of Stanford University, Fuller also graduated from Harvard Law School, and served in the Navy during the recent war. He joined the W. P. Fuller Company in 1937.

PACIFIC COAST DISTRICT SALES MANAGER NAMED

Clay H. Hollister has been appointed Pacific Coast District Sales Manager for the General Plywood Corporation of Louisville, Kentucky, plywood and flush door manufacturers.

In making the announcement, Carl B. Robbins, President of the Company, stated Hollister will have charge of sales of General Plywood Products throughout the eleven western states and will maintain officers in Pasadena, California.

SERVICE CLUB AND SWIMMING POOL

The U. S. Engineers office in San Francisco has announced the awarding of a general contract to the Vezey Construction Company of Oakland, for the construction of an Enlisted Mans Service Club and Swimming Pool at Camp Stoneman, near Pittsburg in Contra Costa County.

The cost of the project is $520,983.

GRAMMAR SCHOOL BUILDING

Prichard & Son of Modesto have been awarded a $210,092 contract for the construction of the new 8-class room, kindergarten, offices, and toilet rooms Tully Road Grammar School near Modesto. The building to be of frame and stucco construction.

Swartz & Hyberg of Fresno are the architects.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
James Macmillan, President; Arthur T. Brown, Secretary, 740 N. Country Club Road, Tucson, Arizona.
Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.
Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.
Colorado Chapter:
Raymond H. Ervin, President; James M. Hunter, Secretary, 2049 Broadway, Boulder, Colarado.
East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.
Montana Chapter:
Ralph H. Cushing, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.
Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.
Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millord H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.
Pasadena Chapter (California)
Robert H. Ainswarth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Rembergen, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.
San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.
Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.
CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.
Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.
Spokane Chapter (Washington):
Nael E. Thomson, President; Kenneth D. Storment, Secretary, Hutton Building, Spokane, Washington.
Utah Chapter:
George Cannon Young, President; Theodore R. Pope, Secretary, 29 South State Street, Salt Lake City 1, Utah.
Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.
Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.
Hawaii Chapter:
Kenneth W. Roehrig, President; James Morrison, Secretary, 334 Federal Bldg., Honolulu, T. H.

EAST BAY ASSOCIATION OF ARCHITECTS

The annual meeting of the East Bay Association of Architects selected the following officers and directors to serve for the ensuing year:

James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; and Chester Treichel, Treasurer. Oscar M. Price, A. Lewis Koue, and John Carl Warnecke will serve as Directors.

* * *

Richard W. Shoemaker, consulting mechanical and electrical engineer, and Robert Bruen, heating engineer and contractor, spoke before a recent meeting on engineering and heating problems. Formerly connected with the Chase Brass and Copper Company, Shoemaker and Bruen, internationally known in the field of heating and cooling, are now associated with "Thermo-Radiant Consultants."

NORTHERN CALIFORNIA CHAPTER

The annual meeting was held on January 25, with officers and directors for the ensuing year being named as follows:

Donald Beach Kirby, President; Ralph N. Pollack, Vice-President; W. Roland Gibbs, Secretary and Bolton White, Treasurer. Wilbur D. Peugh, John Lyon Reid, Gifford E. Sobey, were named Directors and Wayne S. Hertzka was elected the one new Delegate to the California Council of Architects.

(See page 40)

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Anderson, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E.
San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Steve Barnes, President; Harry W. Bolin, Vice President; Lewis K. Osborn, Sec-Treas. DIRECTORS. Richard W. Ware, Geo. E. Brandow, L. T. Evans, Harold P. King, and Donald F. Shugart.
Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

ENGINEERING RESEARCH CHIEF NAMED AT U.C.

Commodore Henry A. Schade, a key figure in the Navy's gigantic wartime and postwar research program, assumed his duties as professor of mechanical engineering and director of research for the University of California's College of Engineering the first week in February.

President Robert G. Sproul made the announcement of Commodore Schade's appointment to the Berkeley campus to direct the College's million dollar a year research program.

As a key man in the Navy's engineering establishment, Commodore Schade directed the critical aircraft carrier program between 1942 and 1945; led the famous Naval Technical Mission to Europe on the heels of America's GI's to ferret out German technical data; and has been director since 1945 of the great Naval Research Laboratory in Washington, D. C.

Morrough P. O'Brien, dean of the College of Engineering, said that "Commodore Schade's appointment will fill an important need. One of his primary concerns will be to develop a more even division of research between government and industry."

PREVENT FIRES and EXPLOSIONS
Caused by EARTHQUAKES!

Plus a Manual Control For Other Emergencies!

SAFETY ENGINEERS and scientists say the Sentinel is the most accurate and dependable earthquake actuated shut-off valve in the world!* On the job 24 hours a day! A record of more than 10 years of reliable service . . . *proven* during a period which included two major seismic disturbances. * Names on request

Indispensable in live seismic regions.
•
Recommended for use with Liquified Petroleum Gases.
•
Thousands installed in the United States.
•
List of installations available on request.
•
Available at leading wholesale plumbing establishments.
•
Indorsed by National Bd. of Fire Underwriters.
•
Leading Fire Prevention Engineers Approve.

Take No Chances . . . Install The
SENTINEL
AUTOMATIC GAS SHUT-OFF VALVE

Designed to shut off automatically when there's an earth shock or explosion sufficient to damage buildings or pipe lines.

Listed by the Underwriters' Laboratories and specified by leading architects and engineers for installation in schools, fire stations, factories, theaters, churches, stores, municipal, military and utility buildings. A. I. A. File No. 29-F-6

Write for illustrated folder.

SECURITY VALVE CO.
410 San Fernando Rd., Los Angeles 31, California
Phone CApitol 6191

CENTRAL CALIFORNIA CHAPTER ASSOCIATED GENERAL CONTRACTORS

The general offices of the Central California Chapter of the Associated General Contractors of America have been moved into new quarters in the Chancery Building, 564 Market Street, San Francisco.

Removal of offices from the Sharon building to the new location, according to Wm. E. Hague, Manager, were undertaken as a means of better serving the contracting industry and members of the organization.

ENGINEERS TO LECTURE FOR U.C. EXTENSION

Twenty-three new instructors have been appointed to the engineering teaching staff of University Extension, University of California at Los Angeles, according to L. M. K. Boelter, Dean of the U.C.L.A. College of Engineering and head of Engineering Extension. Addition of these men, all outstanding in their fields, brings the total of engineering instructors for the Extension spring 1949 program to 112, according to Dean Boelter.

The appointees include Charles W. Bahme, Captain in the Los Angeles Fire Department; Clarence G. Carlson, Robert E. Rawlins and Eugene L. Edwards, aviation engineers; Maurice J. Curtis, engineer; Charles R. DePrima and John D. Cole of California Institute of Technology; Bernard Epstein, research director. Moses A. Greenfield, chief of

spectroscopy division in the Atomic Energy Project at U.C.L.A.; Hugo W. Hiemke, Edward M. O'Connor and Robert A. Hubbard, engineers; Arthur Koehler, wood technologist; Fred D. Schwartz, engineering consultant; Martin J. Snow, assistant planning superintendent in the Public Works Department; Gordon Stater, attorney; C. H. Van Marter, training and safety representative.

Philip Finkelstein, engineer in the Long Beach Naval Shipyard; Boyd Georgi, architect; Steven J. Kolar, estimator; Richard Pomeroy, chemical engineer consultant; Martin Summerfield, chief of Rocket Research Division in the Jet Propulsion Laboratory at California Institute of Technology and J. L. Waisman, metallurgical engineer.

University Extension Engineering courses numbering over 100 opened during the first week in February.

SOUTH PACIFIC REGIONAL CONFERENCE ILLUMINATING ENGINEERING SOCIETY

Architects, engineers, builders and all who are interested in the application of lighting principles are invited to attend a South Pacific regional conference of the Illuminating Engineering Society in San Francisco March 3 and 4, according to S. H. Hazleton, chairman of the Northern California section of the society. The conference will be held in the auditorium of the Pacific Gas and Electric Company at 245 Market Street. The hours will be 9:30 to 12 and 1:30 to 4:30 o'clock.

Speakers of national prominence in the field of illumination will attend, including Lee E. Tayler of Detroit, senior lighting engineer of the Detroit Edison Company and president of the Illuminating Engineering Society, who will deliver the welcoming address.

The opening session March 3 will be devoted to a discussion of incandescent and fluorescent light sources by Charles R. Long, district engineer in the lamp division of Westinghouse Electric Corporation at Los Angeles, and J. W. Howard, also of Los Angeles, who is district engineer in the lamp department of General Electric Co. The afternoon session will be a technical session on engineering design.

On Friday morning, March 4, a symposium on store lighting will be conducted, and in the afternoon a symposium on school lighting. Retail store merchandise managers, school administrators and others interested are particularly invited to attend these two discussions.

The speakers on store lighting will include D. P. Caverley, director of commercial engineering of Sylvania Electric Products Corporation, who will

(See page 44)

Halsey Taylor DRINKING FOUNTAINS
Whether it's public buildings, schools, warehouses, industrial plants, churches, hospitals . . . in fact, in any edifice where people gather . . . Halsey Taylor Drinking Fountains meet the need for health protection! Their many distinctive sanitary features make these modern fountains the specification for '49.
THE HALSEY W. TAYLOR CO. WARREN, O.
A-1

IN THE NEWS

EXHIBIT BUILDINGS

El Dorado county has let a contract to James P. Morton of Placerville for the construction of three exhibit buildings at the County Fair Grounds at a cost of $182,955.

RECREATION

The City of Burlingame has awarded a $115,582 contract to Wm. C. Smith of Burlingame for the construction of a recreation building at the Washington Park. Oscar R. Thayer, Burlingame, is the architect.

POST OFFICE

Plans are underway for the construction of a new Post Office building in Fresno (California). J. T. Cowan of Fresno is the general contractor.

PAROCHIAL HIGH

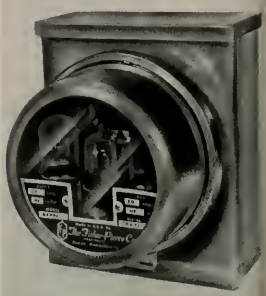
The Robert McCarthy Company of San Francisco has been awarded a $900,000 contract for the construction of a 15-classroom, cafeteria, gymnasium, office and convent High School Building in San Rafael, California. H. A. Minton & Wilton Smith, San Francisco, are the architects.

SHOP BUILDING

The Maino Construction Company, San Luis Obispo, has been awarded a $100,990 contract for the construction of a structural steel frame, and stucco Agricultural Shop and Laboratory building for the San Luis Obispo High School. Kump & Falk, San Francisco, are the architects.

NEW SERIES 62405 PHOTOELECTRIC

A new single unit outdoor lighting control for interval night lighting has been announced by FISHER-PEARCE CO in Boston, Mass., called "62405 Photoelectric Relay."



Consists of a light sensitive photorelay and built-in time switch which automatically turns on the lights at the preset value of day light and a automatic time switch turns off the lights at any preset time during the night.

Compact in size, dependable regardless of weather, easy to install. Suitable for commercial signs, billboards, display windows, street lighting, factory areas, and loading yards. Operates on standard 115 v A.C.—other models available.

PARADISE. Work will start c once on the construction of a 2 bed hospital and 25-bed sanitar ium in Paradise, California, at a cost of $250,000. John B. Anthony Oakland, is the architect. Building will be 1 and 2 story concrete block and frame.

CERAMIC VENEER
demonstrates ITS VERSATILITY

THE PROBLEM of producing a unified building design on a complex sloping lot is beautifully solved with Adhesion Type CERAMIC VENEER Terra Cotta. The wide choice of surface finishes and decorative shapes available in this modern material places maximum versatility in the hands of the architect. *Permanence, ease of maintenance* and *protection* for delicate and expensive equipment are added advantages of using CERAMIC VENEER.

• *For information on how you can provide these advantages for your clients, write...*

PACIFIC TELEPHONE AND TELEGRAPH COMPANY BUILDING
Roseburg, Oregon
Whitehouse, Church, Newberry and Roehr, Architects
Woole-Complon Co. Contractors

•

Recent Contracts also using CERAMIC VENEER...

J. C. Penney Co.
Palo Alto, Calif.

Marine Fireman's Bldg.
San Francisco

California Title Insurance Co.
Redwood City, Calif.

Bank of America
Auburo, Calif.

N. CLARK & SONS
Division of
Pacific Clay Products
605 MARKET STREET • SAN FRANCISCO 5, CALIFORNIA

PACIFIC
Los Angeles
Portland
Salt Lake City

MERLE POTTER TO SMOOT-HOLMAN

Merle A. Potter has been appointed Director of distributor relations for the Smoot-Holman Company of Inglewood, California, manufacturers of industrial and commercial lighting equipment.

Merle A. Potter

Potter is well known to the lighting and construction industry throughout the West and was formerly assistant manager of the Standard Wholesale Electric Company of Los Angeles.

Smoot-Holman commands a prominent place in the electrical lighting field and appointment of Potter is in keeping with their continuous expansion.

NEW YORK AIRPORT

(From page 9)

whole length and with modern two-level traffic interchanges. The underpass itself is a major engineering feat since it had to be constructed to withstand pressures from below sea level and support two bridges capable of handling 300,000-pound planes without interference from the flow of vehicular traffic.

The underpass has been described by Mr. Cullman as a huge "concrete boat" that weighs 92,000 tons. It has been waterproofed to withstand outside pressure or uplift exerted by ground water at the airport. Gutters are provided along the sides which empty into a large sump located seventeen feet below sea level. At this point electric pumps automatically lift all storm water which falls within the structure to a higher level where it can run off into the drainage system.

At its widest point the underpass handles six lines of traffic. It is 136 feet wide and contains 45,000 cubic feet of concrete and 3,000 tons of reinforcing steel. At its thickest point it has seven feet of concrete below the roadway surface.

The construction of the underpass required excavation of 145,000 cubic yards of earth. Placed three feet apart and operated twenty-four hours a day, 750 well points "dried" the area to ten feet below sea level, to keep it from flooding during the period of construction. Two taxiway bridges for aircraft span the underpass. They are streamlined in design, and each is 130 feet long and 100 feet wide, with concrete paving. The underpass required eighteen months to complete.

Modern electrical living with its many time saving appliances and sight saving lights puts an extra load on home or commercial wiring.

When you design wiring installations why not play safe by specifying **Certified Adequate Wiring.** You assure your client years of satisfaction, convenience and safety while helping protect the loan and resale value of his building. Be proud to be the man **who did that wiring.**

Your local utility engineers will be glad to assist without cost or obligation in the preparation of wiring layouts. Consult this Bureau for further information.

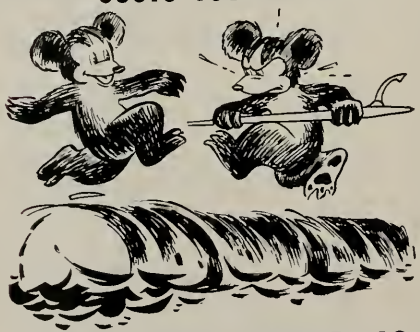
●

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street, San Francisco 3

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK
Specify it in your home
Available through Lumber Dealers
LOS ANGELES
601 W. 5th Street
Phone MIchigan 6294
SAN FRANCISCO
333 Montgomery Street
Phone DOuglas 2-3883
J.H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.

QUALITY building material
COSTS YOU LESS



E. K. WOOD LUMBER CO.
GENERAL OFFICES P. O. Box 1618, Oakland, Calif.
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

HEADLINE NEWS & VIEWS

By E. H. W.

THE average factory worker in the United States produces twice as much as does the comparable factory worker in British industry.—L. Rostas, International Labor office.

* * *

THE new East Wing of the University of California at Los Angeles Library, one of the first structures in U.C.L.A.'s $38,000,000 building program, was recently opened.

* * *

Expenditures for highway construction since the war ended have totalled more than $2.50 billion.

* * *

"I am one of those who is frankly worried about the pitch of the spiral of inflation, and hope we can come to grips with it under the functioning of a free system."—F. G. Gurley, Pres., Santa Fe Railway.

* * *

WITH existing taxes so high as to be a principal cause of a serious shortage of new equity capital, all suggestions for increases in present levies must be balanced against possible adverse effects upon the economy.—Chamber of Commerce of the U. S.

* * *

Contrary to common opinion, thousands of homes are being built and sold, including the land, for $4,500 to $7,900, and range in type from the two-bedroom house to the three-bedroom house.

* * *

"Profiteers are a consequence and not a cause of rising prices":—Lord Keynes.

* * *

San Franciscans witnessed more than a million dollars of heavy construction mobile equipment when the Construction Industry Caravan rolled down San Franciscos main business streets as a part of Construction Week—January 10-15.

* * *

Revisions downward in some price extras of stainless steel products have been announced by Russell M. Allen, Vice-president in charge of sales for the Allegheny Ludlum Steel Corporation.

* * *

On top of its production of nearly 3,000,000 new city and farm homes and a great volume of other private building, the building industry has broken all records in supplying publicly financed construction since the war:—Construction Industry Information Committee.

* * *

One of the "fanciest" pieces of promotion to cross our desk in many a moon is the PLAN before you PAINT your plant "color selector" issued by the American Marietta Company of Chicago, Illinois.

IN THE NEWS

ELECTED PRESIDENT

N. R. Patterson, Tulsa, Oklahoma, has been elected president of the American Institute of Steel Construction.

ARCHITECT FOR SCHOOL

Birge M. Clark & Walter Stromquist, architects of Palo Alto, have been selected to do the College Park School addition for the San Jose Board of Education.

CONSTRUCTION SHOW

More than 60-firms representing the San Francisco Bay Area exhibited at the Builders Market Days show, which was held at the Builders Exchange in San Francisco early in January.

The event was exceptionally well attended.

APARTMENT

The Sherratt Company of Oakland, have been awarded a general contract for the construction of a 20-apartment building in Berkeley at a cost of $200,000. Thomas & Meret of San Francisco are the architects.

SCHOOL WORK

The Pacific Company of Oakland, has been awarded a $148,900 contract for the construction of a gymnasium and agricultural building for the Livermore High School. Robert Dalton, Oakland, is the Engineer.

REMODEL COURT HOUSE

McCoy & Butler, Yuba City, have been awarded a contract for remodeling the Sutter County Court House in Yuba City. J. S. Gould, San Francisco, is the architect.

HOUSING CONFERENCE

A San Francisco Bay Area Economy Housing Conference was held in San Francisco early in February to determine a plan for providing low cost housing for that segment of the Bay Area community which can not afford to purchase homes in the higher bracket.

The conference was sponsored by the San Francisco Chamber of Commerce, in cooperation with the Home Builders Council of California, and the Federal Housing Administration.

Here's Quality!

In every step in the manufacture of Smoot-Holman lighting equipment there is pride of workmanship which places this equipment at the top of the lighting industry's "Who's Who."

SMOOT-HOLMAN COMPANY
SMOOT-HOLMAN
INGLEWOOD CALIFORNIA
MADE IN U.S.A.

Offices in Principal Western Cities—Branch and Warehouse in San Francisco

IN THE NEWS

CHURCH

St. Lukes Methodist Church, Fresno, has awarded a $120,000 contract to Roy Badgley of Le Grand for the construction of a church and Sunday school building.

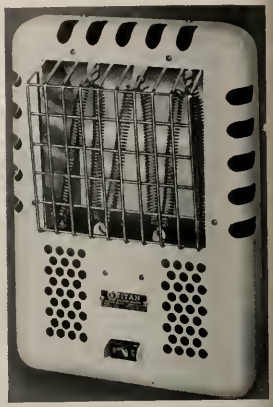
MORE SEATS

Robert L. Wilson, San Francisco, has been awarded a contract by the University of California for installation of seating on the west side of Memorial Stadium in Berkeley at a cost of $467,800.

DOUBLE EFFECT WALL HEATER

The new TITAN RADIANT FAN wall heater, produced by Titan Mfg. Co. Inc., Buffalo, N. Y., establishes a new record for low cost and is even less than many portable types of comparably high quality.

This built-in type combines all the benefits of radiant heat with fan forced heat; safely, efficiency, easily installed, and low operational cost. Ideal for bathroom,



bedroom, nursery, laundry room, and recreation room where instant warmth is desired.

Baked enamel finish with polished chrome grill.

BOWLING ALLEY. The Mills Construction Company, San Francisco, have been awarded a $400,000 contract for the construction of a bowling alley and 6-story building in Redwood City. J. Lloyd Conrich, San Francisco, is the architect.

WARDEN AUTOMATIC VALVE

A new improved WARDEN Automatic Low Pressure shut-off valve which incorporates a precision lapped synthetic rubber

seat that provides for positive closure has been announced by the SECURITY VALVE COMPANY of Los Angeles, California.

The simple mechanical action (gas or fluid use) is self contained, accurate and dependable; must be reset manually after closure. Sizes ¾ in. to 8 in. Available for both low and high pressure use.

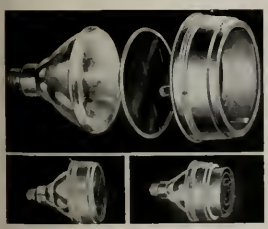
NEW SANI-DRI MODEL READY

New, improved heating element in the SANI-DRI electric hand and face dryer manufactured by the CHICAGO HARDWARE FOUNDRY COMPANY of North Chicago, makes it possible to completely dry hands or face in 25% less time.

No more current is consumed, no increase in price, easily installed and replacement of older models made in few minutes. Complete information available from manufacturer.

COLOR LIGHTING ACCESSORY

A quick way to turn ordinary display window lighting into sparkling color lighting is the new light weight Par-38 color clip, with inter-



changeable louver that completely cuts off all side spill, recently announced by the AMPLEX CORPORATION of Brooklyn, N. Y.

The new color clip fits any Par-38 spotlight of floodlight reflector lamp; easy to install; interchangeable glass color filters.

FORCED WARM AIR FURNACE

New model MOR-SUN pressed steel forced warm air furnace manufactured by Morrison Steel Products Inc., Buffalo, N. Y. is completely die stamped, including the casing.

Heat exchangers are of 12-guage steel. Unit is easily installed for use with gas and oil.

ACOUSTI-CELOTEX

...the Best Known Name in Sound Conditioning ...brings the Comfort of Priceless Quiet and Better Hearing

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Why even small homes need concealed telephone wiring

Home owners appreciate extra conveniences — in small homes as well as large. And that usually means built-in conduit and extra telephone outlets. They may be located in the bedroom, living room, kitchen—wherever the user will spend a lot of time...now and in the future.

Beauty of home interior is assured with concealed wiring. And the cost is small. Telephones then can be added or moved later on without drilling holes. For free help in planning built-in conduit, call your local Pacific Telephone office and ask for "Architects and Builders Service."

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

FORDERER CORNICE WORKS

Manufacturers of
Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.
SAN FRANCISCO, CALIF. HEMLOCK 4100

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco - DO 8311

A. I. A. ACTIVITIES

(From page 31)

The members heard reports on the plans before the San Francisco City Planning Commission given by George S. Duggar, Chief of Planning and Research, and by Architect Sydney H. Williams, Chief of the Master Plan Division, both of whom were introduced by Ernest Born. They reviewed San Francisco's fast growing Civic Center and described plans for the study of a comprehensive site plan. Support of the Architects was asked and unanimously given.

Annual committee reports were also presented.

* * *

NEW MEMBERS: **Associate,** Henry V. Chescoe; **Junior Associates,** Charles B. Collin, Wilson G. Combs, George E. Drake, Jack D. Ely, and Ted R. Moulton.

CALIFORNIA COUNCIL OF ARCHITECTS

The regular quarterly meeting was held on February 11 and 12 in Santa Barbara.

Chief among topics under consideration were legislative matters of the current California State Legislature; expansion of State work allocated to private architects; reduction of costs of construction through economy in government; and continued emphasis on acquainting the general public with the architectural profession.

ARCHITECTS INVITE COOPERATION FOR CONSTRUCTION RESEARCH

The New York Chapter of the American Institute of Architects has issued an invitation to all elements of the construction industry to cooperate during the ensuing year in the Chapter's Technical Committee's program of investigating means of increasing construction and cutting costs.

For the past two years the Technical Committee of the Chapter has been meeting regularly in the search for better methods and increased economy of building costs.

Attention has been given such subjects as new building materials, building codes, air conditioning, insulation and acoustical treatments, and trends in design.

SAN FRANCISCO ARCHITECTURAL CLUB

The anuary project of the San Francisco Architectural Club was "criticized" by Ernest Born, while the "critic" for the February project will be J. Wells Hastings of Oakland.

Much of the coaching on architectural problems considered by the Club during 1948 was done by Mario Ciampi of San Francisco.

* * *

The Beaux Arts Institute of Design has set the

(See page 43)

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$60.00 to $90.00 per M, truckload lots, delivered.

Cartage—Approx. $9.00 per M.

BUILDING PAPER—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.80 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.

Sash weights, cast iron, $100.00 ton.

Nails, $5.50 base.

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.94
Crushed Rock, ¾" to 1½"	$2.38	$3.13
Roofing Gravel	2.81	3.50
River Sand	2.50	3.06

Sand—

Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.02 per bbl. f.o.b. car; delivered $3.60.

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White — 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. 3/16"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

¾ x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

¾ x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

¾" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .40 per □ ft.
Double Strength Window Glass	.60 per □ ft.
Plate Glass, under 75 sq. ft.	1.50 per □ ft.
Polished Wire Plate Glass	2.25 per □ ft.
Rgh. Wire Glass	.60 per □ ft.
Obscure Glass	.40 per □ ft.

Glazing of above is additional.

Glass Blocks—$2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness (3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common..... $85.00 per M
No. 2 Common..... 83.00 per M
Select O. P. Common ..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry..... 8 to 24 ft.	185.00
"B" grade, medium dry.....	150.00
Plywood	18c to 20c per ft.
Plyscord	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$13.00 per square; No. 2, $10.50; No. 3, $9.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—Tapered: ½ " to ¾" x 25"—$17.00 per square.
Resawn: ¾" to 1¼" x 25"—$22.00 per square
Average cost to lay shakes,— 8.00 per square

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, everage with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

MARBLE—(See Dealers)

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine.....$1.85 per gal. in 5-gal. cont.
Raw Linseed Oil.....$3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil.....$3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil.....$3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neet wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Seilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.

Composition Stucco—$4.00 sq. yerd (eplied).

PLUMBING—

From $175.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" ter end gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per squere.
Redwood Shingles, $15.00 per squere in place.
5/2 #1-16" Ceder Shingles, 4½" Exposure .....$18.25 squere
5/8 x 16"—#1 Ceder Shingles, 5" Exposure .....$18.00 square
4/2 #1-24" Royal Shingles, 7½" Exposure .....$23.00 squera
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resewn Cedar Shekes, 10" Exposure $24.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $29.00
1 x 25" Resewn Ceder Shekes, 10" Exposure 22.00

Above prices ere for shekes in plece.

SHEET METAL—

Windows—Metel, $2.50 a sq. ft.
Fire doors (everege), including hardwere $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glezed)

Copper, $1.25 sq. ft. (flet).
Galvenized iron, 65c sq. ft. (flet).
Vented hip skylights 90c sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill.
$270 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

STORE FRONTS (None availeble).

TILE—

Ceramic Tile Floors—$1.70 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glezed Tile Wainscot—$1.85 per sq. ft.
Asphalt Tile Floor ⅛" x ¼"—$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—

Glezed Terra Cotta Wall Units (single faced laid in place—approximate prices:

2 x 6 x 12 ..... $1.25 sq. ft
4 x 6 x 12 ..... 1.50 sq. ft
2 x 8 x 16 ..... 1.45 sq. ft
4 x 8 x 16 ..... 1.75 sq. ft

VENETIAN BLINDS—

75c per square foot end up. Installatio extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

A. I. A. ACTIVITIES

(From page 40)

following schedule for the February-March problems which start on February 25th with renderings on March 31st.

Class "C" Project is a "Wedding Chapel" given by A. Hensel Fink, Philadelphia, Architect. An award of $50 is given by the Alumni members of the Stelier Hirons of New York in remembrance of their patron and teacher Frederick C. Hirons.

Class "B" Project is "A Town Meeting Hall." This is the M. K. Murchison prize, awarding $25 to the winner and $15 to the runner-up.

Class "A" Project has been outlined by Glen Stanton, architect from Portland, Oregon.

Members of the Architectural Club may obtain a six months trial subscription to Architect & Engineer magazine for $1.25.

JOHN BOLLES NAMED TO CONFERENCE BOARD HEAD

John S. Bolles, San Francisco architect, was recently named chairman of the Building Industry Conference Board at the group's annual meeting. Other officers elected included James Gayner, Mechanical Engineer, vice-chairman, and Wm. E. Hague, manager of the Central California Chapter, Associated General Contractors of America, was re-elected honorary secretary.

The Building Industry Conference Board is made up of representatives of the A.I.A., AGC, Structural Engineers Association of Northern California, Producers Council, Golden Gate Chapter of the American Society of Heating and Ventilating Engineers, Association of Landscape Architects, San Francisco Section of the American Society of Civil Engineers, National Contract Hardware Association, and Building Owners and Managers Association of San Francisco.

SOUTHERN CALIFORNIA CHAPTER

Karl With, Director of the Modern Institute of Art, Los Angeles, and a member of the faculty of the University of California at Los Angeles as Art Historian, spoke at the February meeting on the subject "The Place of Modern Art in Contemporary Architecture".

BUILDING TRADES WAGE (JOB SITES) NORTHERN AND CENTRAL CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U.S. Department of Labor. (Revised to November 1, 1948.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Marin	Sacramento	Santa Clara	San Mateo	Solano	Stockton	Watsonville
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	2.81¼	3.00	2.81¼	2.81¼	2.05*	3.00
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.25	2.00	1.75	2.25	2.25	1.60*	2.25
CARPENTERS	2.16	2.16	2.12½	2.12½	2.16	2.12½	2.12½	2.16	2.12½	2.12½	2.12½
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.25
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
ENGINEERS: MATERIAL HOIST	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½
PILE DRIVER	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.52½	1.42½	1.52½	1.52½	1.52½	1.42½
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.52½	1.42½	1.52½	1.52½	1.52½	1.42½
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.81¼	2.00*	2.50*	2.81¼	2.81¼	2.81¼	2.50*
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.25*	2.25*	2.50*	2.81¼	3.00
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.00*	2.00*	2.25*	2.16	2.50
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
ROOFERS	2.16	2.16	2.16	1.87½	2.16	2.00	2.00	2.16	2.16	2.25	2.25
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.12½	2.12½
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81½	2.81¼	2.81¼	2.81¼	2.05*	2.81¼
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.67	2.00	2.67½	2.67½	2.67½	2.43¾	2.67½

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:
CENTRAL CALIFORNIA CHAPTER, ASSOCIATD GENERAL CONTRACTORS OF AMERICA
with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

CONSTRUCTION ENGINEER (CIVIL)
GENERAL SUPERINTENDENT
PROJECT MANAGER

Twenty five years of wide practical experience on frame, steel, concrete and masonry bldgs. of all types. Estimating, sub-division, sales, detailing & specification writing background. Dependable, energetic. Excellent local references. Have car. Free to travel. P.O. Box 807, San Mateo, Calif.

WANTED: Product Engineer with experience wanted as a permanent addition to the staff of an industrial Development Department located in Minnesota. Work involves product development including travel for consumer contacts. Program relates to products from wood. Submit details education, experience, references, salery requirement, photograph. All replies considered confidentiel and will be acknowledged. Reply Box 238, Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

WANTED: Top architectural designer, renderer, draftsman of ability, by long established central western office.

Modern designer with background of historical architecture.

University graduate, European travel and study, or training at American Academy of Rome.

Good background, initiative, diplomatic, pleasing personality.

Prospective future partnership.

Furnish complete information, references. Box 110, Architect & Engineer, 68 Post St.

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

TERRAZZO
for Floors and Wainscoting in Hospitals, Theaters, Hotels, Office Buildings, Schools and Stores.
DECORATIVE • DURABLE • SANITARY
FOX TILE CO.
3247 E. 14th Street, Oakland
Phone: ANdover 1-0431

Dr. With has a keen interest in architecture, and as Director of the Modern Institute of Art, has sponsored numerous programs which have included as speakers, Gregory Ain, Welton Becket, Whitney Smith, and Sumner Spaulding.

Consideration was also given entries to the National Honor Awards Program.

PASADENA CHAPTER

Officers and directors of the Pasadena Chapter, A.I.A. elected for the ensuing year included:

Robert H. Ainsworth, President; John N. Douglas, Vice President; William Ainley, Treasurer, and Burton Romberger, Secretary. Directors are Harold J. Bissner, Roland E. Coate, and Edwin Westberg.

* * *

The January meeting included installation of new officers and a talk by Robert J. McAndrews, Promotion Manager of Young & Rubicam Advertising Agency and Vice President of the Advertisers' Association of the West.

The talk of McAndrews will be printed in the March issue of Architect & Engineer magazine.

WITH THE ENGINEERS

(From page 33)

show slides of some recent outstanding store lighting installations developed by leading New York designers.

The school lighting symposium speakers will include Dr. Darell Boy Harmon of Austin, Texas, who is widely known for his work in lighting Texas schools; Doyt Early, architect of the California state division of school house planning, who will report on results of a lighting evaluation conducted in 25 recently-built California schools; and Dr. Leland H. Brown of Stanford University, who will review the newly-published "American Standard Practice for School Lighting" of the Illuminating Engineering Society, which was approved in 1948 by the American Standards Association.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

Lloyd Oye, West Coast Manager of the Magnaflux Corp'n, assisted by W. A. Henkee, gave an illustrated talk at the February meeting on the subject, "The Use of Magnaflux in Structural Welding Inspection", and Paul Jeffers spoke on "Welding Inspection in General".

The general discussions which followed were in charge of C. M. Corbit, Jr., Moderator.

Business discussions included reports from the Legislative Committee, E. C. Hillman, Jr.; and Overlapping Jurisdictions Committee, C. Gordon DeSwarte.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

SANTA BARBARA ADOBES. By Clarence Cullimore, A.I.A. Architect. Santa Barbara Book Publishing Company, 10 Oleander Ave., Bakersfield, California. Price $4.90.

Santa Barbara, world famed California community, is justly proud of its old adobe houses which were standing long before the State became a part of the Nation.

The author has captured the full romance and glamor of his subject and brings to mind those colorful days of the 1800's when flags of Spain, Mexico and later the Stars and Stripes flew over the village of Santa Barbara and the first adobe bricks were laid to build a home for the first white man's house in the now famed playground community.

Clarence Cullimore is a Fellow of the American Institute of Architects and an outstanding authority on adobe structure, old and new. Numerous illustrations add to the appeal of the book which has been termed "Fascinating reading for future generations" and is definitely not a book for the moment.

GOOD AND BAD MANNERS IN ARCHITECTURE. By A. Trystan Edwards. Transatlantic Arts, Inc., Forest Hills, New York. Price $2.75

ENGINEERING CONTRACTS AND SPECIFICATIONS. 2nd Edition. By Robert W. Abbett, John Wiley & Sons, Inc., 440 4th Avenue, New York 16. Price $3.75.

A practical and authoritative guide for engineers, architects, and contractors which includes completely new material on construction insurance, elements of the specifications, principles of specification writing, and assembling the specifications. Contains section on legal considerations, competitive bidding contracts, pre-qualification of contractors, and arbitration. Consideration is given private and government procedure.

The author has had extensive experience as a consulting engineer.

MAINTENANCE MEN LOOK AT HOUSING DESIGN. By National Association of Housing Officials, 1313 E. 60th Street, Chicago 37.

Housing design is one thing to those planning a home, but it is something else to the maintenance man, who tells some of the simple basic designs to follow when building.

The report is directed to planners of large scale rental projects who are trying to achieve lowest initial and operating costs consistent with high quality and long life.

PACIFIC MANUFACTURING CO.

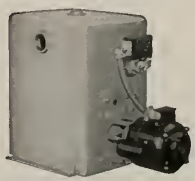
High Class Interior Finish Quality Millwork

16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. 5-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THarnwall 4196

MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT

Pumping Machinery for Every Purpose



For Service Call DOuglas 2-6794 or MUtual 8322

SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY

Producers and Finishers of
Domestic and Imported Marbles

525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834

GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer

REPUBLIC STEEL

See Sweet's Catalog File or write us for full information.

REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO

DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

IN THE NEWS

HOUSING EXPERT

Thomas S. Grey, an attorney with years experience with FHA has been named Administrative officer in charge of Cooperative Housing and Yield Insurance, according to a recent announcement by Commissioner Franklin D. Richards.

Grey will serve as assistant to Clyde L. Powell, Assistant Commissioner who is in charge of rental housing, and will be available for conference with groups and individuals interested in cooperative housing and yield insurance.

sound control surveys made without obligation

Gold Bond
SOUND CONTROL PRODUCTS
Made by National Gypsum Company

SOUND CONDITIONING FOR:
SCHOOLS . OFFICES
AUDITORIUMS . HOTELS
RESTAURANTS . THEATRES
HOSPITALS . FACTORIES

Whether your problem is the elimination of noise or the scientific acoustical treatment of interiors to provide better hearing conditions, we can recommend the type of installation and materials best suited for the job. A 'phone call will arrange a consultation at your convenience without cost or obligation.

VAN ARSDALE-HARRIS CO.
ENGINEERS & CONTRACTORS
Distributors
595 Fifth Street
San Francisco
EXbrook 2-4404

REPRESENTATIVE

Donald E. Reysa has been appointed Pacific Coast representative of the Trinity Portland Cement Division of the General Portland Cement Company of Chicago and will maintain headquarters in the Company's Los Angeles office. Company mills are located in Dallas, Fort Worth, and Houston, Texas.

RESEARCH COUNCIL

More than 800 business leaders and industrialists attended the Northern California Research Conference in San Francisco early this month.

The conference was jointly sponsored by the San Francisco Chamber of Commerce, the University of California, Stanford University, and Stanford Research Institute.

WATER SOFTENERS

Formation of the national association of manufacturers of water softening equipment has been inaugurated with a group of meetings in Chicago.

Fred V. Hayner, president of the Shepley-Hayner Corporation of Freeport, Illinois, is serving as temporary chairman pending formation of a permanent list of officers and directors.

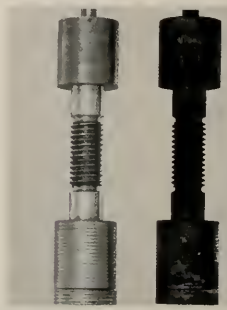
CHANGES NAME

Announcement of the change of the company name to Wright Manufacturing Company, and the appointment of Bertram R. Scheff as general sales manager has been made by Thomas F. Millane, president of the Taylor Manufacturing Company of Milwaukee, Wis.

Main office of the firm will be moved to Houston, Texas, following completion of the construction of their new $2,000,000 plant addition in that city.

CORROSION PREVENTATIVE

Methods of combatting rust developed as a result of wartime experience with corrosion of ferrous metals.



The Angier Corporation of Framingham, Mass., in cooperation with chemists and chemical manufacturers, have developed a paper wrapping material called ANGIER VPI which gives a maximum of rust protection. An article packaged in ANGIER VPI may be used immediately when unwrapped without any processing or degreasing.

Above photo shows exposure in open shed after 6-months: VPI wrapped (left), right without.

BOYS HIGH

Cahill Bros., San Francisco, has been awarded a general contract for the construction of a 40-class room, administration, chapel, music room, gymnasium, swimming pool, faculty residence, and athletic field Boys Parochial High School to be built at Phelan and Judson Ave. in San Francisco. Paul A. Ryan and John M. Lee, San Francisco, are the architects. Cost of project is $2,507,570.

ARCHITECT SELECTED

Leonard F. Starks, architect of Sacramento, has been selected as the architect for a new high school building to be built in Del Paso Heights, Sacramento county.

Yes, CABOT'S STAINS
Give Natural Beauty
To any design in any site

Colors that Stay True
A Superior Wood Preserver
Cost 1/3 as much as good paint

GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO · SACRAMENTO
OAKLAND · LOS ANGELES · DENVER

Fine ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO 11

SUNBEAM VISIONAIRE

The Sunbeam Lighting Company of Los Angeles announces the newest in fluorescent lighting fixtures in the "VISIONAIRE"; an eight foot long, four lamp slimline fixture with unusual construction and design features.

Can be installed by one man, and features reflected light as the primary medium for seeing.

AUTO REPAIR SHOP

The E. S. McKittrick Company of Oakland, have been awarded a general contract for the construction of a $33,900 auto repair shop in Oakland, California.

STATE CONTRACT

Williams & Barrows contractors of Burlingame have been awarded a $399,770 contract by the State of California for the construction of Farm Colony ward buildings, physicians buildings and garages at the State Hospital in Camarillo.

MASONITE CONTRACT

The Masonite Corporation have awarded a contract to Barrett & Hilp, San Francisco, for the construction of the first unit of a hardwood manufacturing plant at Ukiah, California.

Expected to be completed in June the building will house the manufacturing unit, tempering plant and warehouse.

PORTLAND CEMENT

Jay E. Jellick has been appointed manager in charge of enlarged operation of the San Francisco headquarters of the Portland Cement Information Bureau.

He previously served as District Engineer and manager of the Pacific Coast offices of the Portland Cement Association, and for the past five years has been serving as sales manager of the Pacific Portland Cement Company.

MODESTO WAREHOUSE

The A. R. Bacon Company, Modesto, have been awarded a general contract for the construction of a $30,800 warehouse building in Modesto for the Modesto Board of Education. Harry J. Devine, Sacramento, is the architect.

OFFICE BUILDING: The Louis C. Dunn Company, San Francisco, have been awarded a contract for construction of a $169,900 office building in San Mateo.

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING · PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Las Angeles

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Brownskin
VAPORSEAL
The resilient building paper creped to S-T-R-E-T-C-H
Quality Products Since 1895
ANGIER PACIFIC CORPORATION
55 NEW MONTGOMERY ST. SAN FRANCISCO 5, CALIF.
7424 SUNSET BOULEVARD LOS ANGELES 46, CALIF.
A complete line of Angier products available from your building material dealer

Lumber — Gypsum Wallboard

Interior Trim — Gutters

Special Moldings

The place to SAVE

is

LUMBER MANUFACTURING CO.

225 Industrial Ave. JUniper 7-1760

SAN FRANCISCO

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5

EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET

SAN FRANCISCO

Index to Advertisers

ANGIER Pacific Corp.	48
ARCHITECTS Reports	40
BAXTER & Company, J. H.	36
BURKE, W. J. & Co.	36
CLARK, N. & Sons	34
CLASSIFIED Advertising	43
CENTER Stationery	*
CLINTON Construction Company.	44
CONTINENTAL Water Heater Co.	*
DETROIT Steel Products Co.	3
DINWIDDLE Construction Co.	47
DUFFY Tile Co.	48
FIREBRICK Construction Co., J. N. J.	*
FORDERER Cornice Works.	40
FOX Tile Co.	44
FULLER, W. P. Co.	*
GLADDING, McBean & Co.	*
GUNN, Carle & Company	46
HANKS, Inc., Abbott A.	48
HAWS Drinking Faucet Company	30
HERRICK Iron Works	47
HOGAN Lumber Company	44
HOWE Brothers	28
HUNT, Robert W., Company	48
HUNTER, Thos. B.	47
JOHNSON, S. T. Co.	*
JUDSON, Pacific-Murphy Corp.	40
KRAFTILE Company	31
LUMBER Manufacturing Co.	48
MARBLE Institute of America	*
MATTOCK, A. F. Co.	48
MICHEL & Pfeffer Iron Works	Inside Back Cover
MILLER Company, The.	30
MULLEN Mfg. Co.	47
MORRISON Steel Products, Inc.	Back Cover
NORTHERN California Electric Bureau	35
PACIFIC Clay Products Co.	34
PACIFIC Coast Gas Association	*
PACIFIC Manufacturing Company	45
PACIFIC Portland Cement Company	*
PACIFIC Telephone & Telegraph Co.	39
PITTSBURGH Testing Laboratory	48
POOR Richard Engraving Co.	47
REMILLARD-Dandini Co.	48
REPUBLIC Steel Corporation	45
SCOTT Co.	47
SHUGART, The Harold, Co., Inc.	25
SECURITY Valve Company	32
SIMONDS Machinery Company	45
SIMPSON Logging Co.	*
SISALKRAFT Company	44
SMOOT-Holman Co.	37
SOULE Steel Co.	38
STANLEY Works, The	*
SUNBEAM Lighting Co.	26
SUPERIOR Fireplace Company	*
SWINERTON & Walberg Co.	47
TAYLOR Co., Halsey W.	33
TORMEY Company, The	47
U. S. Bonds	Inside Front Cover
VAN Arsdale-Harris Co.	46
VERMONT Marble Company	45
WALKER, P. J. Co.	27
WESIX Company	*
WESTERN Air and Refrigeration, Inc.	29
WESTERN Asbestos Co.	39
WOOD, E. K. Lumber Company	36

*Indicates Alternate Months

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET

SAN FRANCISCO, CALIF.

TILE CONTRACTORS

Shower Doors, Tub Enclosures

Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

DUFFY TILE CO.

253 Minna St., S. F. YUkon 6-1489

ABBOT A. HANKS, INC.

Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company

ENGINEERS

Inspection - Tests - Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY

Los Angeles - All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

ARCHITECT AND ENGINEER

PRUDENTIAL INSURANCE BUILDING, Los Angeles

MARCH 1949

Sometimes women have to carry the banners

PERHAPS you'll see the story of Joan of Arc, as portrayed on the screen by Miss Ingrid Bergman.

It's a thrilling episode in the world's history, proving that sometimes a *woman* must take the lead in the fight she believes in.

Modern women, too, must often pick up the banners . . . in *their* struggle for the security and well-being of their family.

Though earning the necessities of life is primarily a man's job, sometimes it takes a *woman* to *insure* her family's future by setting them on the *only sure road* to security . . . through adequate, regular savings.

For the modern woman, there is one foolproof method of winning her fight for savings. It's United States Savings Bonds—an investment with the soundest backing in the world . . . an investment that pays back *four* dollars for every *three*.

And there are two foolproof savings plans, too. One is the Payroll Savings Plan, for those on a company payroll. The other is the Bond-A-Month Plan, for those not on a payroll, whereby bonds are purchased through the checking account.

If your home is your career, urge your husband, and all other working members of your family, to start now—today—on the bond-saving plan for which they are eligible.

If you are working, sign up yourself at your firm or bank, and influence the other working members of your family to do the same.

Soon the bonds will start piling up.

Soon you'll know that confidence in the future which only comes through saving.

It's a wonderful feeling for anyone. And for a woman—how doubly wonderful!

AUTOMATIC SAVING
IS SURE SAVING
U.S. SAVINGS BONDS

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

• ARCHITECT AND ENGINEER

Vol. 176 No. 3

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

The new Prudential Insurance Building at Los Angeles is one of the nation's most outstanding structures. (See Story and Pictures, Page 14.)

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

MARCH

EDITORIAL NOTES . . . 4

NEWS & COMMENT ON ART . . . 7

PUBLIC RELATIONS AND THE ARCHITECT . . . 10
By ROBERT J. McANDREWS

LINCOLN MEMORIAL PARK MAUSOLEUM, Portland, Oregon . . . 12
JOSEPH W. HEILER, Architect

PRUDENTIAL INSURANCE BUILDING, Los Angeles . . . 14
By LEONARD E. MILLER

A PLAN FOR MASS TRANSPORTATION FOR SAN FRANCISCO . . . 21
By GEORGE S. HILL

PACIFIC GAS & ELECTRIC BUILDING, San Francisco . . . 22
ARTHUR BROWN, JR. & JOHN BAKEWELL, JR., Architects

A.I.A. ACTIVITIES . . . 31

WITH THE ENGINEERS . . . 32

HEADINE NEWS & VIEWS . . . 36
By E. H. W.

IN THE NEWS . . . 37, 46

ESTIMATOR'S GUIDE, Building and Construction Materials . . . 41

BUILDING TRADES WAGE SCALES, Northern & Central California . . . 43

BOOK REVIEWS & PAMPHLETS . . . 45

INDEX TO ADVERTISERS . . . 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Peahorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office, Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

EDITORIAL NOTES

"Our duty is to remain strong and alert, for only through strength and vigilance can America guard its heritage. Freedom of enterprise is one of the fundamental freedoms that have kept the United States strong."—Earl O. Shreve.

* * *

MODERN ARCHITECTURE

The subject of "modern architecture" is so frequently debated that the following thinking of Professor Esmond Shaw of the Cooper Union Art School in New York City should be of interest to those who advocate and those who deplore "modern" architectural trends.

"The outward manifestations of good contemporary work can be copied in an eclectic manner just as easily and with as little sense of responsibility as any of the period styles.

"In a sense, all architecture built today is modern architecture. Every structure from the most sincere, honest expression of materials and function to the most dishonest and meretricious piece of fakery is modern if it is built now.

"Good modern architecture is useful, convenient, well constructed and beautiful. Its beauty grows naturally out of the construction, the materials and the functions or use. It succeeds in unifying into one apparently simple design all of the following modifying conditions: The climate, the site, the location, the topography, the landscaping, the orientation, the materials, the construction, the mechanical equipment, the cost, the function and, most important of all, the people involved.

"The aesthetic of good modern architecture grows naturally out of its philosophy. It holds that new construction methods and new materials demand new expressions. It abhors all fakery, dishonesty and imitation. It maintains that each problem should be solved on the basis of its own particular requirements without any harking back to sentimental reminders of the past."

* * *

MORE SCRAP NEEDED

High Government officials have emphasized the immediate need for a much greater production of steel, and steel mill management has responded by producing a tonnage since the first of the year which has been equalled but once before in the history of steel production.

But, for More Steel—Heavy Scrap is a MUST.

With a greater supply of heavy scrap steel mills could produce more steel, more quickly. The shortage of heavy scrap during the past year, despite the fact that some of the huge quantities of heavy scrap in Germany and Japan is coming through, limited the production of steel mills and foundries.

Even at the present record rate of production, very little of the 123,000,000 tons of steel and steel products produced and exported during the war has come back as scrap, there is still not enough steel to meet the current and anticipated demands of our domestic economy, military requirements, and foreign aid programs.

More heavy scrap is essential if steel production is to be increased to the point where the ready inventory represents a desired position in national security.

You can do your part to assist in increasing steel production.

Obsolete equipment, unused machinery gathering dust in the corner, broken and worn out parts, old tools, fixtures, chains, valves, plumbing, cable, and many other metal items—make it a point to get them into the scrap yard, at once.

* * *

CONSTRUCTION COSTS

According to the results of a nation wide survey conducted by the Associated General Contractors of America, construction costs throughout the country are stabilizing or showing a tendency to decline slightly.

Every indication points to a high volume of construction in 1949 with estimates of potential volume of new construction reaching an excess of the $17,700,000,000 record of 1948.

The contractors survey shows possible increases in public works which will tend to offset possible reductions in industrial and commercial building.

Except for steel and some construction machinery, materials appear to be in a relatively plentiful supply, and in the field of skilled workmen most communities indicate a more plentiful supply of craftsmen.

While the majority of Contractors felt construction costs were dipping, such factors as the nation's national defense program, and the international situation could very easily reverse the current situation.

* * *

AMERICAN INSTITUTE OF ARCHITECTS

The 1949 Convention of The American Institute of Architects, held a few days ago in Houston, Texas, should develop many suggestions for the betterment of the architectural profession and an advancement in understanding between those progressive Architects throughout the nation who comprise the membership of the Association.

Official delegates to the Convention represent practically every community in America. An interchange of "ideas" between people representing such diversity in geographical locations, local traditions, and personalized thinking is bound to accrue to the advantage of residential, commercial, and industrial design.

NEWS AND COMMENT ON ART

PORTLAND ART MUSEUM INSTALLS COAST INDIAN COLLECTION

The artistic achievement of the tribes inhabiting the narrow coastline between the mountains and the sea north of the Columbia River is dramatically presented in the Portland Art Museum's collection of Northwest Coast Indian Art.

Installed, with Miss Yeffe Kimball of New York, an artist and an authority on Indian Art, as consultant, the collection will be opened to the public during the latter part of April, and will thereafter be available to visitors.

It is apparent at once in this exhibition that the art and the life of the Northwest Coast Indians is an indivisible unit. No line of demarkation existed between art and use. The objects included in the collection—baskets, Chilkat blankets, masks, headdresses, ceremonial staffs, spoons and food dishes, to name a few—speak vividly of the culture which produced them. This culture no longer exists, and such a collection as this can never again be assembled from original sources.

The art of the men preserved the religious and social heritage of their tribes in woodworking and carving of great vigor and skill. The women's humbler arts of basketry and weaving utilized yellow and red cedar bark, spruce roots, and vegetable dyes with exquisit craftsmanship.

Some Eskimo objects are included, but most of the works are from the Tlingit, Haida, Tsimsian, Nootka, Kwakiutl, and Salishan peoples. In them all permeating influence of the Indian's sense of kinship with the animal world is felt. Their designs are based on animal motifs each animal has his own symbol, and each symbol has significance in the life of the owner of the design, which may have been handed down through several generations. Although these inner meanings may be lost upon the modern museum visitor, the Indian's use of decorative pattern and his sensitive handling of materials is a source of artistic inspiration.

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., Director of the California Palace of the Legion of Honor, Lincoln Park, has announced the following schedule of exhibitions and special events for March:

EXHIBITIONS: French Art of the Book; Oils by William Gaw; Paintings by Bertha Baker.

EDUCATIONAL ACTIVITIES: Art classes for children, ages 4 through 15, each Saturday at 10:00 a.m. Conducted by Katherine L. Parker and Lilly Weil Jaffe.

Painting class for adults, each Saturday at 2:00 p.m. Instruction by Frank Lobdell.

Gallery tours each Wednesday and Friday at

TOTEM POLE

Exhibited at Portland Art Museum

McCutcheon & Reagh, Photo

2:30 p.m. Conducted by Katherine L. Parker and Lilly Weil Jaffe.

ORGAN PROGRAMS: Organ program by Uda Waldrop every Saturday and Sunday, 3 p.m.

FREE MOTION PICTURES: 2:30 p.m. Saturday. Admission free.

CITY OF PARIS

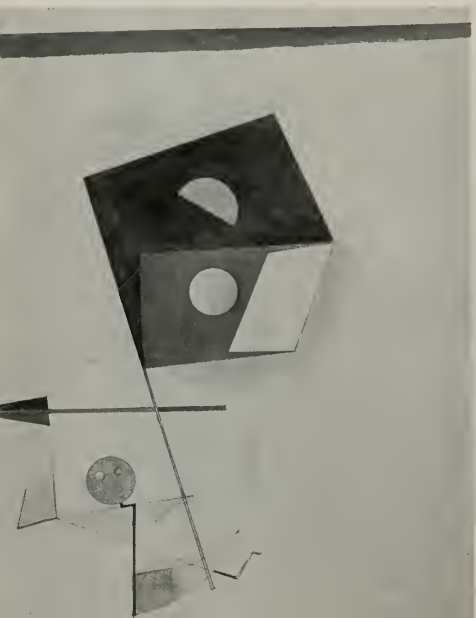
The Rotunda Gallery at the City of Paris, San Francisco, presents an exhibition of Paintings by Gladys Lloyd Robinson of France, South America and New Orleans from March 5 to March 26.

The Picture of the Month to be shown in the Art-In-Action Shop will be a group of Paintings by William Gaw; Monotypes by Dan Saye Groesbeck, and Guatemalan Textiles and Peasant Costumes.

PAUL KLEE at San Francisco Museum of Art

By ROBERT M. CHURCH

When the great new Paul Klee Exhibition opens at the San Francisco Museum of Art, the Bay Region gallery public will have their first opportunity of viewing two hundred paintings and drawings by one of the most outstanding creative geniuses of our times. This showing is given added stature in view of the fact that the larger number of these works have never been shown before in this country. Through the Museum of Modern Art, the Klee Foundation in Switzerland has arranged a series of showings of these important paintings opening in San Francisco on March 24.



For a man who has been severally categoried as Surrealist, Expressionist, Humorist, and by one writer even as Medievalist and Orientalist, Klee's beginnings, and indeed his entire personal life were simple and unasuming. Born in Switzerland near Berne, where he was destined to create some of his greatest works, his childhood was spent in an atmosphere of music and musicians. His German father was conductor of the Berne symphony orchestra, and his French mother also came of a musical family. In his early years, Klee played the violin so well that there was a question which of the arts he would select as his most satisfactory personal expression. It is well to note here that the structure and the expressed inner vision of music which are component parts of any great work in that medium have obviously had their effect in broadening the philosophical approach to painting of this artist.

When he was twenty Paul Klee went to Munich to study drawing. There followed several years of serious study, and trips to Italy, where he significantly enjoyed his visits to the Naples aquarium and to the classical antiquities of the Naples Museum. In the early 1900's he returned to Berne to begin his real artistic production with a laboriously produced series of extremely fine etchings including the now famous "Perseus" and "Young Woman In a Tree".

CONQUEROR (Eroberer) 1930

Paul Klee, 1879-1940

Watercolor on cloth, 16 x 13¼"

Lent by the Klee Foundation to San Francisco Museum of Art Exhibition in the War Memorial Building San Francisco.

Photos, The Museum of Modern Art

In 1906 he went to Munich to marry Lily Stumpf the musical daughter of a physician. At the same time he came to know the works of Van Gogh, Cezanne, Matisse and a little later Kandinsky, Franz Marc, and Auguste Macke. An understanding of these works and a corresponding growth and freedom in his own expression led to the formation of the famous "Der Blaue Reiter" group (Klee, Kandinsky, Marc, Macke) in Munich who made the word "Expressionism" in art known throughout the world.

Trips to Paris familiarized him with the works of those important contemporaries living there at the time, but nothing ever enticed him away from his own researches and studies that produced the great pictures which he painted. Not naturalistic reality, but reality translated through a special inner eye, a reality of relationships and connotations filled with sensitivity, humor, tragedy, joy, placidity as the individual work might dictate. Too, Klee's development cannot be fastened into periods. From 1915 on Klee might paint one day a complicated tonal watercolor such as the "Magic Theatre", while at the same time drawing with fine line delicacy the "Flying Seeds".

Some of the oils such as the "Centrifugal Forces" of 1929, are free form overlapping sections of transparent color planes; others as the "Dispute" of the same year are neatly sectioned off geometrical areas outlined in dark colors. Often, more clearly naturalistic, Klee will offer the delicate sadness of his "Penitent", 1935, or the subtle humor of the "Conqueror" of 1930.

Indeed a various artist, he worked surrounded by a number of easels supporting works in the process of completion. He would spend a long time in another corner of the room only to return to this or that work adding a necessary cross hatching in one drawing, extending the single tense line of another, or perhaps applying a thick layer of color to a third. Though he painted in the widest variety of media, using paper, linen, burlap or tin for his surface, his works have not the feeling of experimentations. Rather one feels a complete realization within whatever idea, and in whatever media he has selected for a specific work.

Shortly after the first world war, in which his two friends Franz Marc and August Macke were both lost, the establishment of the great Bauhaus school, first at Weimar and later at Dessau, called forth many of the greatest artists, architects, designers and typographers of the period. Klee was no exception; he served as a professor from 1920 until 1929. While there, Feininger, Javlensky, Kandinsky and Klee formed the "Blue Four" and exhibited as a group through Germany and America.

In 1929 Klee left the Bauhaus to teach at the Dusseldorf Academy for the next three years until the Nazi revolution forced him back to Switzerland. There he remained working in seclusion the next seven years. Paul Klee died in 1940 at the height of his creative powers, leaving to the world some of the finest paintings of our times, perhaps of any time.

TWILIGHT IN THE PARK (Dammerung in Park) **PAUL KLEE, 1932**
Tempera on Canvas, 13½ x 24½, lent by the Klee Foundation

PUBLIC RELATIONS and the ARCHITECT

By ROBERT J. McANDREWS*

"Ladies and Gentlemen—I was asked to brief in 10 or 15 minutes some of the high points of the few things we went over at Yosemite on the subject of Public Relations. I know it is like carrying coals to Newcastle to talk about Public Relations to people in Pasadena after that terrific promotion that you put on on New Year's day. That is the acme of community publicity and I know you all have a part of it because I have yet to meet a Pasadena native who is not on one of those Tournament of Roses Committees—my compliments to you and my apologies for trying to tell you anything about Public Relations.

"Now for this matter of Public Relations, Ladies and Gentlemen—and I say **Ladies** and Gentlemen because that is one place where all of you wives of architects can help your husbands every hour of the day and every day of the year without knowing a thing about architecture—that's one place where you are a part of the business—in fact, you probably know that in some communities it has gone so far (such as in Oakland) that the wives have their own auxiliary, and they are out there promoting and publicizing all the time on behalf of architecture as a profession and their husbands as an integral part of that profession.

"Going over it now very briefly and touching the high spots, we first of all, to treat the thing academically, should have a definition. The definition of the Council's Public Relations Committee occupies a whole page; I won't repeat it, but it is an excellent one. To brief it: I think we might say that Public Relations consists of just two things: first of all, conducting your business and your profession in a way that the public as well as you gets profit out of it, and secondly, not being content with sitting back and assuming that the public is going to know that, but telling the public at every possible step what is going on in your profession that it good, what is going on that is constructive, and what is going on that helps them. That requires a consistent, continuous campaign on two levels; on the personal level with all of you as individuals, and on the corporate level, as we might call it, with your activities as a chapter.

"Now, Mr. Ainsworth has given you a whole talk on Public Relations tonight—all of those things that he mentioned are part of the business, the political angle, the joining together with the other professions, the exhibiting of your work in The Institute Convention. Without hurting anyone's feelings or insulting you, I believe that it is safe to say that the majority of architects are inclined to be on the introvertish side—you like to work with your hands and your mind—I think most of you get more of a kick out of working at your drawing board and your desk than you do going out and meeting people. It is all right to do that if you have someone who is going out and meeting the people for you, if you have a salesman or an advertising agency which you can't have, or a publicity man which very few of you can afford or feel the need of, so it all ends up that you pretty much have to be your own salesman, and there is a long way to go.

"Now, the things that I am saying are just what we would say to a new client who came into the office and didn't know a thing about advertising and publicity and some of the elementary considerations to be borne in mind. You may wonder why it is necessary . . . Well, perhaps in boom times it isn't necessary; perhaps in the war years that we have gone through and these current years when Southern California is expanding so tremendously, there probably is a pretty good living for almost everybody in the profession. It is still not too overcrowded, there is still a great amount of building, you haven't caught up with demand, but I think that it is safe to say that that is not going to be the picture of the indefinite future. Every in-

*NOTE: *Robert J. McAndrews, Promotion manager of Young & Rubicam Advertising Agency and Vice President of the Advertisers' Association of the West Coast, presented this address at the regular January meeting of the PASADENA CHAPTER, A. I. A.*

dex that we have been able to uncover in our business shows not a slump but a gradual leveling off—perhaps in a few years what we would call a recession. You can see it in your own everyday contacts; you know the Christmas business was off in the stores and that the cost-of-living index of the U. S. Department of Labor has been down for the last three months in a row; you see the huge ads for the department stores and the Christmas clearances; all things that we didn't have previously. As you may know, the number of bankruptcies per month, for instance, is about quintuple what it was a year ago at this time in Los Angeles County, and all those things point to the fact that we aren't going to keep on living at a terrifically increasing income for all of us. And naturally anything that affects the general economy is going to affect you as a profession.

"Irrespective of what kind of economic temperature we head into, it is essential that you have some kind of public relations, good, bad or neutral. After all, you never sign up a client, you never make a sale, you don't get one dollar coming in until someone on the outside has, first of all, knowledge of you and about architecture as a profession, and secondly a favorable opinion about you; and that, after all, is Public Relations. So every dollar that you make is the result of some kind of Public Relations—people got the information and the opinion somewhere about you, and they come to you. In addition to that, your public relations has the objective of ministering to your self-respect, your self-repute—man doesn't live by bread alone, and all of us like to be well thought of by our fellows both in the profession and outside of it: When we say we are an architect, we like people to pay us a compliment or say something nice about the profession or at least think it, and all that is a part of Public Relations. It is a continuing job to do.

"Now, that is on the personal level. On the, shall we say, corporate level, there are still many, many objectives to be won. First of all, there is this whole objective of the retention of free enterprise in America which is definitely a public relations problem for you, for all business, and for all professions. It's not 'something-that-can't-happen-here': I'll wager that if you asked any doctor in England three, five, or ten years ago to make a prediction whether England would have State Medicine in 1948, that nine out of ten would have said no; and yet it happened, they have it; they probably will have State-Something-Else. The latest we read about is that they are probably going to get State Law—and State Architecture is not so far beyond that in logic; you can conceive it.

"You certainly have had competition from governmental bureaus in the counties and in the state; most of you will agree that many of the counties and our own State of California have had in the past bureaus of architecture doing work that should be done by private architects. That is just another manifestation of bureaucracy which has intruded into many, many fields which were formerly fields of free enterprise. Now, I know that architects as a group are doing a lot to combat that; I know that many of the jobs that formerly were done by State architects in Sacramento are being parcelled out, maybe grudgingly, to private architects. I know that in Los Angeles and Kern Counties the office of County Architect has either been abolished or the jobs and responsibilities have been cut down to size, and they have been put in the position of being an umpire and not players in the game. But even in those counties and those states and in the country as a whole where you don't have complete state architecture, you have the constant threat, so it requires continuous vigilence on the political level. And that is one facet of this whole larger problem: a free enterprise and its retention for all American business. You have a much more favorable climate to work in on that aspect of public relations than you have had in the past because the American people, I believe, are more in sympathy with the opponents of bureaucracy today than they ever have been before. There is more editorial disfavor for the encroachment of government, and there is more of a vocal group fighting it in Congress and in Washington, and you have there a tide which you as members of a professional can swim with, both as architects and as members of these over-all professions.

"I might point out that you are practically the only one of these professions that does not regard this problem seriously enough to have your own full-time paid public relations counsel — press agents in many respects. Believe me, the dentists, doctors, lawyers, teachers, are all out there working this publicity business on a professional basis, paying for it, and getting results. The convention of the State Bar Association at Santa Barbara had from three to five columns every day in the Los Angeles papers; I haven't seen that from your architectural conventions. When the American Medical Association meets, they are on page one every day of the convention—there is a real job that has been done on that.

"Now, getting into the small, everyday, local personal field. Let's go over a few of the kindergarten aspects of this business. First of all, be proud of that A.I.A.; you have something there which represents a tremendous amount of your time, money and energy, and it should have a lot more public recognition than it has. You should make that, by constant effort, by constant public

(See Page 30)

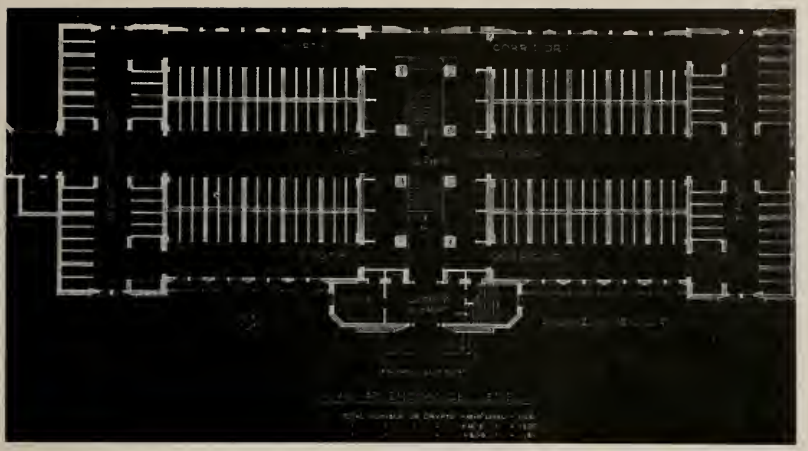
ADDITION TO THE LINCOLN MEMORIAL PARK MAUSOLEUM

LINCOLN MEMORIAL PARK MAUSOLEUM

PORTLAND, OREGON

JOSEPH W. HEILER, Architect

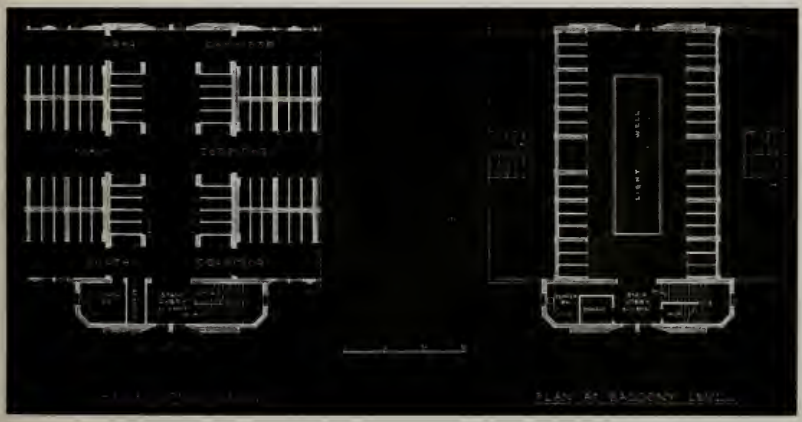
LORENZ BROS., General Contractor



Plan at Entrance Level

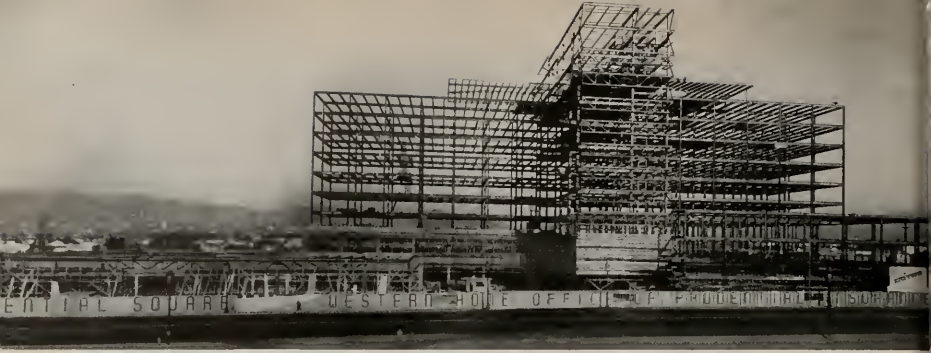
The Mausoleum is located on a hillside in the Memorial Park grounds, and consists of four major additions since 1925. This latest addition will serve as the upper facade and entrance to the building. It consists of two stories and a balcony and contains 2458 crypts, offices, flower and storage rooms and on each level are accessory and toilet rooms.

It is constructed entirely of reinforced concrete, cement stucco exterior, steel sash, marble crypt fronts, and carpeted floors with marble borders. The principal levels are served by a lift at the West end of the building. Forced circulation hot water is used for heating throughout.



Plan at Upper Level

Plan at Balcony Level



NEW PRUDENTIAL INSURANCE BUILDING TAKES FORM AS STEEL FRAMEWORK IS ERECTED *Whittington, P*

PRUDENTIAL INSURANCE BUILDING — Los Angeles

LIGHTEST BUILDING PER SQUARE FOOT EVER BUILT IN LOS ANGELES

By LEONARD E. MILLER

Recent large advertisements in Western newspapers have aroused general interest in the newly completed Prudential Insurance Co. Western Home Office building in Los Angeles. But to the architect, probably the most interesting feature of this ultra-modern building is the fact that it is the lightest building per square foot in Los Angeles. With 517,000 square feet, it has a dead weight of only 32,000 tons.

Credit for this accomplishment must go to the architects, Wurdeman and Beckett, of Los Angeles. They realized that an architects must sometimes be a politician and lobbyist, as well as artist and engineer. They succeeded in having the local building code revised to permit the use of Vermiculite plaster as fire protection for the entire structural frame of a type 1 building.

Considerable savings were also effected in dead weight and the incidental construction costs by simplicity of design. Deep reveals and heavy masonry walls and piers were eliminated wherever possible. Six-foot depth spandrels made possible the use of light steel trusses to support the tributary floor and wall loads, and to resist the lateral forces due to wind and earthquake. Incidentally, these deep spandrel trusses reduced the unsupported length of wall columns by 40%, with a like reduction in the bending movements induced in the columns by seismic forces.

As a further step in reducing dead weights and

ARCHITECTS

WURDEMAN and BECKETT
Los Angeles

STRUCTURAL ENGINEER

MURRAY ERICK

GENERAL CONTRACTORS

WILLIAM SIMPSON CONSTRUCTION CO.

Scaffolding in place during construction

Otto Rothschild, Photo

construction costs, the three street front walls and the fire-protection of the steel frame therein were constructed of light weight gunite blown against steeltex backing attached to the structural members. The gunite was placed as a hollow envelope of two inch shells on both the inner and outer faces of the steel spandrel trusses and other structural members of the frame. This construction resulted in dead weight saving in these structural walls of approximately 50%, and largely eliminated the use of normal forms.

In conventional construction, the proportion of dead weight to live load in office buildings has been approximately five to one. In the Prudential Insurance building, this ratio is less than three to one. The following table summarizes these savings:

Survey of Dead Weight Savings

14,500 yds. Ltd. Wt. Conc x 1,350 lbs saving 19,500,000 lbs., or	9,800	tons
Structural steel saving	1,000	"
Vermiculite fireproofing saving 1.5 x 150 = 225 lbs. concrete Vermiculite 4 x 6 25 lbs. 200/12.5 15 lbs. x 520,000 = 7,800,000 lbs., or	3,900	"
Precast stone facing 120,000 sq. ft. @ 15 lbs. = 1,800,000 lbs. or	900	"
Total saving	15,600	tons
Dead weight as designed	32,000	tons
Design live load, 1st story columns	14,300	"
Tonnage of structural steel	3,620	"

In the studies of weight and cost savings made by Wurdeman and Beckett, many interesting factors were developed. Among these conclusions the following are of particular interest.

The average cost of fire protection of structural steel beams with concrete is from 1/12 to 2 times the cost of the structural steel beam itself laid down in the fabricators' yard, prior to the costs of fabrication and erection. The weight of stone concrete fire protection for an 18" beam is 225 lbs. per lineal foot of beam. This fireproofing weight is reduced to only 25 lbs. by the use of vermiculite plaster fire protection. The saving in weight, assuming beams to be spaced at 8 ft. centers, is 25 lbs. per

First Three Floors of the eastern wing are occupied by a well known New York Department Store.

Julius Shulman, Photo

square foot of the building area. Furthermore, the 225 lbs. per lineal foot is 10% of the carrying capacity of the 18" beam on a 25 foot span. It also developed that vermiculite plaster fire protection can be provided for a cost of less than the cost of forms required for concrete fire protection.

While it is true that light weight concrete costs considerably more per yard than stone concrete, there was a saving of approximately $180,000 in the cost of structural steel in the Prudential building, whereas the premium paid for light weight concrete amounted to only $70,000. Considerable savings were also made in the reinforcing steel and footing.

The Prudential building is designed for the convenience and efficiency of employees. For maintaining employees' health alone, 2,553 square feet are devoted to a medical unit.

Ten stories high, covering a two block long area on Wilshire Boulevard, the building contains 517,000 square feet. On the North side, back of the building, is a 1000 car parking lot. But both en-

RIGHT
Workmon applies roof insulation. In all, 95,000 square feet of such insulotion was used in the ultra modern structure.

BELOW
Workmen lay tar paper in preparation for application of insulation ta the roof.

NIGHT SCENE

From tenth floor; floor to ceiling plate glass windows of Executive Offices give remarkable view.

trances have been treated with equal importance. There is no "back door" appearance on the parking lot side.

The building is light buff in color, and has rectangular wings leading East and West from a central core or column. The central column houses the elevator shafts, stairs, utility rooms and rest rooms. Actual working area is primarily located in the wings. Prudential working spaces are lighted by ten miles of fluorescent tubing, or approximately one mile to each floor.

Windows are framed in aluminum, and aluminum louvers overhang each window on the southern exposure to allow maximum light with minimum glare. These canopy louvers of extruded aluminum not only control the sun's rays, but serve to create a long, low feeling rather than one of height. All aluminum surfaces have gone through an alumlighting or anadosing process at the factory to give a smooth, hard, easily maintained surface. The aluminum is dipped in boiling sulfuric acid tanks through which a carefully controlled electric current is passed, after which the finish is cured in boiling water. It is then ready to withstand all weather conditions and will retain its reflecting qualities without attention for years to come.

Modern air conditioning equipment in the building utilizes three centrifugal compressors supplying 1000-tons of refrigeration.

The corner-stone of the building is a ton-and-a-half piece of the Rock of Gibraltar, which was cut

CONFERENCE ROOM

One of the Conference rooms on the tenth floor, opening on a glassed-in-patio. The triangular shaped table enables each person to have an unobstructed view of charts displayed on wall at end of each room.

GENERAL OFFICE

Note ample window space and fluorescent lighting.

MAIN LOBBY looking towards elevators. Travertine walls and ceilings are accented by green stone floors and soft green leather upholstery.

from the famous fortress and presented to the Company by the British government—a symbol of their slogan, "The Prudential Has The Strength Of Gibraltar." On a wall at the entrance to the lobby on the South side are cast bronze replicas of the seals of the eleven western states and the territory of Hawaii, which were presented to the Prudential by the governors of each. This is the territory covered by the new western home office.

Only a small portion of the main floor is devoted to Prudential's use. A department store and three shops occupy all but the central core leading off the arcade from the street and motor court. Glass partitioned walls with ornamental planting form two walls of the entrance foyer. Travertine walls and ceiling are a sand beige in color, while the green stone floors are brought out in the soft green leather used in the built-in upholstery. The banks of six elevators leading to the upper floors are bleached teak, as is all woodwork in the foyer. Off the foyer are the public payment, ground floor, and mezzanine offices. A news and soft drink shop has an open counter on the north wall of the foyer for public and employee convenience.

The second floor of the building, except for the department store wing, is devoted almost entirely to the dining, medical, and lounge facilities for the 1400 people employed by Prudential in this new western home office building. Meals are provided free to employees in an ultra-modern cafeteria seating 600 at one time. Adjacent to the cafeteria is the employees' lounge, with spacious sun deck as annex. A free library is provided, and music is played through a special built-in circuit, also used for announcements. Also on the second floor is a modernly equipped employee's health service, staffed with four doctors and several registered nurses. Equipment includes the latest in X-ray, dental, and optical apparatus. Employees receive free medical examinations periodically. If defects are found, they are advised to see their personal physician. The medical department is also utilized for examination of prospective employees and insurance applicants.

The dining room is done in soft yellow-green walls with columns accented in pale yellow, and is serviced by two complete tile and stainless steel kitchens, a bakery and butcher shop. In the lounge, large glass fenestrations lead from the library alcove to the sun deck.

On the third floor, the east wing is occupied by the third and last floor of the department store, while the west wing is the mortgage and loan department. The north wall of the west wing is devoted to twelve offices, separated from the main office by sound proof partitions. These partitions are readily moveable, providing for changes in office arrangement without undue cost. Included in the third floor are the building engineering and control facilities, such as compressor and transformer rooms, carpentry and paint shops.

The fourth floor, since there is no department store area, is devoted entirely to Prudential's use. The east wing is taken up with a large storage area that will supply the offices above. The west wing is the beginning of the open office space treatment, repeated in the floors above.

The general clerical offices covering east and west wings of the fifth to eighth floors are almost identical in design. The east wing is 175' x 63', and the west wing is 150' x 908'. These areas are surrounded by windows on three sides, and desks run the full length of each room. The central space dividing these is occupied by elevators, stairs, lavatory facilities and stockrooms.

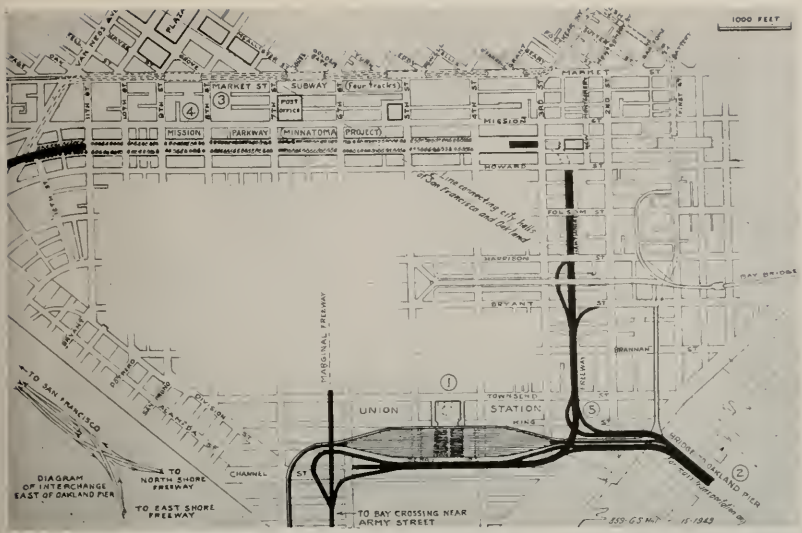
These offices, as almost entirely throughout the building, have acoustical tile ceilings with a baked enamel finish. These ceilings are designed primarily for sound control, and the baked enamel finish will reduce maintenance as well as reflecting the maximum light. Walls are gray aqua with columns of pale yellow green.

The ninth floor differs only slightly from the four preceeding floors. East and west wings of this floor are joined into one large area, eliminating central rooms. Three private offices, separated by soundproof moveable partitions, are included here. Should these offices not be needed at any time, the partitions can easily be removed, and the space becomes part of the general office area.

The tenth floor, or executive penthouse floor, is divided into two wings. The west wing will be the future office space—to be left unfinished until such time as it is needed. The east wing houses executive offices surrounding an outdoor patio court.

(See Page 34)

How the large, vertical masses found in modern-day architectural design can be successfully illuminated is shown on the cover. The exterior floodlighting was accomplished with a combination of 82 narrow beam, wide beam, and medium elliptical beam floodlights.


1000 FEET
MARKET ST
SUBWAY
(Four Tracks)
POST OFFICE
MARKET
MISSION
PARKWAY
MINNATOMA
(PROJECT)
MISSION
HOWARD
MARKET
MARKET
MARKET

PACIFIC GAS & ELECTRIC BUILDING

San Francisco

New Annex on Beale Street Is Shown at the Right

17 STORY
OFFICE BUILDING
SAN FRANCISCO, CALIFORNIA

ADDITION TO PACIFIC GAS & ELECTRIC COMPANY'S GENERAL OFFICES OPENED

ARCHITECT: Arthur Brown, Jr.
John Bakewell, Jr.

ASSOCIATE ARCHITECTS: Weihe, Frick & Kruse

STRUCTURAL ENGINEER: Hall & Pregnoff

GENERAL CONTRACTOR: Cahill Bros., Inc.

Pacific Gas and Electric Company's handsome 17-story general office building at 245 Market Street, San Francisco, has been enlarged two-thirds by a 120,500-square foot addition fronting on Beale Street.

Construction of the addition meets an urgent need for more working space occasioned by the growth of the P. G. and E. system, particularly during the war and postwar years. Of the total area, 17,500 square feet of floor space on five floors also was offered for rent, of which a small amount remains available. Tenants will use 25 Beale Street as their address.

The addition consists of 10 stories erected on an existing 3-story wing of the orginal structure, which was built in 1924, and a new 13-story building extending 137½ feet further along Beale Street. A six-story building was razed to make room when construction began in October, 1946. The company's frontage now is 137½ feet on Market Street and 275 on Beale Street.

The structure is a Class A rigid steel frame building with reinforced concrete floor slabs of light weight concrete. The new building is separated from the old and its 10-story addition by a six-inch space to allow for lateral movement from possible seismic forces. The two buildings are joined by aluminum expansion joints extending vertically from the sidewalk to roof, with horizontal metal expansion plates at the corridor connections.

As with the old building, the street face of the addition is granite textured architectural terra cotta and the property sides are of terra cotta brick. The roof is red tile, with red-tiled sundeck between the new and the old buildings, above the 10-story addition to the latter.

The unity of the new and old buildings is further established by a continuation of the ornamental arches, extending from the ground to the ceiling of the second floor, that characterize the architecture of the orginal building. The sculptured heads of Bighorn sheep in the keystones of the arches

STEEL STRUCTURE

During the time of construction.

CONSTRUCTION

Showing Installation of underfloor ducts for power and communication lines.

FIRST STEEL COLUMN

The first steel column, 38 feet long and weighing 426 pounds per foot is being raised into place by the erection crew. 1850 tons of structural steel was used in the framework, the tallest to be built on the Pacific Coast since 1930.

Bethlehem Pacific Photo

DRAFTING ROOM

With recessed troffer type fluorescent fixtures on four foot centers.

symbolize the mountain power on which the P. G. and E. hydroelectric system is based. No emphasis was given the entrance at 25 Beale Street, since the main entrance to the new and the old building is at 245 Market Street.

Since the site of the P. G. and E. general office building is on filled land beyond the original shore line of San Francisco Bay, 560 main bearing piles 84 feet long were driven to hard pan at a minus elevation of 98 feet and were capped by a concrete mat five feet thick as foundation for the new building. A steel sheet piling coffer dam with cribbing on the inside was driven to protect adjacent properties from displacement of earth.

Features of the new building include exceptional provision for communications, wiring designed to

TYPICAL OFFICE

Ceiling mounted slimline fluorescent fixture with hinged gloss prismatic lens. The rear wall of the room is a soundproof but removable metal partition.

be adequate for all foreseeable needs, complete air conditioning and planned lighting of high quality.

The nature of Pacific Gas and Electric Company's business requires constant communication over an area extending from Kern and Santa Barbara counties in the south to Humboldt and Siskiyou counties in the north, a distance of about 500 miles. Hydroelectric powerhouses in the mountains and steam-operated generating plants in the centers of population must be operated in response to a constantly fluctuating demand, for electricity has to be generated the instant it is consumed. Gas, on the other hand, cannot be transmitted instantaneously. In order to forecast possible changes in demand, which depend to a large extent upon the temperature, P. G. and E. compiles its own weather maps from meteorological data received over two teletype circuits, Western Union and Pacific Telephone and Telegraph.

Because of these needs, the communications system in the new P. G. and E. building is one of

ABOVE VIEW shows corridor lighting with ceiling mounted louvered unit. Glass side panels give even distribution of light on ceiling and side walls.

BELOW is shown suspended slimline fluorescent fixture of new type, designed especially for this building. Bat-wing upward distribution of light provides even ceiling brightness.

the most elaborate in San Francisco. Two cable systems come into the main distribution frames in the basement equipment rooms, one for P. T. and T. lines and one for the company's private lines. The P. T. and T. switchboard is a 1000-line board, one of the half-dozen largest in the city. Four digit local numbers are employed. The board for the company's private line now is being enlarged from 300 to 600 lines.

On each floor of the new building is a communications closet, from which lateral cables radiate to locations in each room. An underfloor duct system provides three ducts, one for power, one for P. T. and T. lines, and one for the company's private lines and battery-operated voice intercommunications system. Floor outlets can be provided at two-foot intervals by tapping the ducts. This gives complete flexibility to the arrangement of furniture and office equipment.

In addition to the weather teletype circuits, the company has Western Union messenger-call stations at several points in the building. It operates from the building three carrier telephone circuits, super-imposed on the company's private telephone lines in a manner similar to wired radio, for voice communications between the general offices and outlying operations at Storrie on the Feather River, Colgate Powerhouse on the Yuba River, and San Rafael.

Power is supplied to the distribution system on each floor from a vertical bus riser, with a disconnecting circuit breaker and a thermal circuit breaker panel for each floor housed in a power closet separate from the communications closet. A double-channel removable baseboard is provided on the interior of the outside walls, with plug-in strip for power outlets spaced 18 inches apart.

The new building is completely air-conditioned. A sectionalized control system compensates for differences in temperature on the east and west sides of the building in the morning and afternoon so that one side can be heated while the other is being cooled if necessary, in order to maintain a constant temperature of 72 degrees throughout the building. Supply and exhaust ducts are carried above the corridors on each floor, which have ceilings two feet lower than the rooms.

Two complete air tempering units serve the building, one in the basement for floors up to the seventh and the other in the attic for the eighth to the thirteenth floors. High voltage electrostatic air filters clean and purify incoming air before it is tempered. Air is pre-heated by the use of steam tempering coils in the ventilating air stream. Additional heating, if necessary, is supplied locally by thermostatically controlled steam convectors recessed beneath the windows. Precooling is accomplished by refrigeration with a 200-ton centrifugal type compressor. Additional cooling is supplied locally by thermostatically controlled circulating cold water cooling coils in the supply outlets near

WIRING
AND
LIGHTING FIXTURES
IN THE
P. G. & E. BUILDING
BY
CENTRAL ELECTRIC CO., INC.
—Contractors Since 1907—
610 THIRD ST.
SAN FRANCISCO
EXbrook 2-2180
556 EL CAMINO
REDWOOD CITY
EMerson 6-4084

Heating, Ventilating, & Air Conditioning
Addition to Pacific Gas & Electric Building, San Francisco by
CORY & JOSLIN, Inc.
509 Polk Street San Francisco

ELECTRICAL OUTLETS every 18 inches around the walls provide maximum opportunity to plug-in desk lamps, dictating machines, fans, check protectors and other electrical office equipment.

the ceiling of each room. Exhaust outlets are at the floor level. The system provides four changes of air per hour during the heating cycle and six changes per hour during the cooling cycle.

Slimline fluorescent lighting has been employed throughout the building, with several different fixtures in use. Slimline lamps operating at 300 milliamperes were chosen in order to eliminate starting switches and to reduce the number of fluorescent lamps to a minimum.

The drafting room is lighted with recessed troffer type fixtures with reeded water-glass panels, mounted on four-foot centers to provide a designed average maintained intensity of more than 75 footcandles. In the offices the fixtures in use include a prismatic glass lens unit with three eight-foot slimline lamps per fixture and two types of suspended luminous indirect four-lamp fixtures with plastic diffusing panels of low brightness, easily removed for maintenance. Extra panels have been stocked so that clean ones may be inserted and the soiled ones taken to the janitor's closet for washing, away from the rooms.

One of the suspended fixtures is a new type, designed especially for the building. It has batwing upward distribution of light to provide even ceiling brightness. The ballasts are surface mounted against the ceiling to reduce weight on the suspension stems and to facilitate installation.

Also especially designed for the building are the corridor fixtures, which are continuous ceiling mounted louvered units shielding a single row of eight-foot slimline lamps. The circuit wiring is carried through the fixture itself. Glass side panels provide even brightness on ceiling and sidewalls. Alternate sections can be switched off to reduce the illumination by half for after-hours lighting.

In the ground floor lobby at 25 Beale Street concealed cove lighting is used for architectural effect.

The new building is served by high-speed automatic elevators with the top call reversal feature, which returns them automatically to the ground floor when the highest floor calling is below the top floor. The entrance lobby doors will be electropneumatically operated by the use of microswitches in the hinged push pars. This system also was designed especially for the new building. Another feature is movable metal partitions in all rooms, which make it possible to change room sizes at will. In the basement is a complete photographic laboratory.

Arthur Brown and John Bakewell were architects for the building. Weihe, Frick and Kruse were associate architects, with the Caddington Company and Hall and Pregnoff as consulting engineers. The general contractor was Cahill Brothers, Inc. The work was done under the supervision of the P. G. and E. engineering department.

PLUMBING

for

PACIFIC GAS & ELECTRIC BUILDING

installed by

SCOTT COMPANY

San Francisco • Oakland • Belmont • Los Angeles

PUBLIC RELATIONS AND THE ARCHITECT

(From Page 11)

relations activity, as well known as M.D., D.D.S., and the rest of them that are your friendly rivals in the professional field. Use it all the time, and I would suggest that, since it is not well known yet, whenever you use it, somewhere spell it out:—don't just say A.I.A.; say American Institute of Architects, so that the great unwashed public that you are always dealing with will know what you are talking about. Every time two doctors get in the elevator in the morning going up to their offices, they shake hands, and one says, "How do you do, Doctor?", the other says, "How do you do, Doctor; how are you this morning, Doctor?" A dentist does the same thing. But get two architects together,—'High, Joe!'

"The point is that Public Relations, after all, is not just hiring Steve Hanigan to do as he does with Florida or Las Vegas or Sun Valley; Public Relations is like building a building, it is a succession of little, tiny impressions on the human mind by lots of people, day after day. Just the spread of the word 'architect' in a constructive way, just publicizing it, is a job that everybody can do. Talk about architecture and let other people overhear you. Get more into government, get to be a part of it, try to make extroverts out of yourselves.

"You have an architect on the Los Angeles and the Pasadena City Planning Commissions; you should have a lot more architects on all the other commissions, especially on those like the School Board, the Library Commission, and the Park Commission, where you are not only going to be spreading your public relations but you are going to be out making valuable business contacts that will mean money in your pocket. Get into clubs more, you have to get out and talk to the public; there are many ways you can do it. There are your school alumni associations, your church, your service clubs—you will find that you can do a job in Rotary or Kiwanis and Exchange and all the rest by getting them to open up the memberships to more categories of architecture and get more of your fellow architects into it. Look at your doctors; they have memberships in Rotary now for stomach specialists, eye specialists, nose specialists, chiropractors, and right on down the line—you could have a whole Rotary Club anywhere with just doctors. Well, why shouldn't you have your school specialists, your church specialists, your house specialists, and so on. When you get into these organizations, don't be content with just sitting back; get active, get on the committees, give them a program. At least once a year, they will be glad to get a program which has an architectural slant.

"In addition to speaking when you can, I would suggest that you write when you can, on the popular level. There is a huge field in the Sunday newspapers, the magazines, and so on, and this will all add up to a greater interpretation of the architect to the public. The other professionals are doing it; think of the tremendous number of popularized medicine articles that are always in print; you can hardly pick up the Readers' Digest without something on that score, and the A.M.A. is just plugged to a fair-thee-well in those articles. There is no reason why A.I.A. shouldn't be the same way, and certainly the subject is interesting enough.

"In summary, you and I know that you have a wonderful product. You know that you have spent your lives in getting prepared to manufacture that product; you know that you have something which is not only good for you but something that is good for the public. The only thing that is lacking is the method of transmission to get across to that public the fact that here is something that is good for them. You can do it with Public Relations. It would be a shame to have this tremendously fine product of your own professional attainments and let it wither away just because of lack of interest, because of lethargy, because of a misguided sense of dignity, or because of professional ethics which often, I think, extend too far in the conservative direction."

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Eleton, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Van Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Brodt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Duggan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

WASHINGTON STATE CHAPTER

The February meeting consisted of showing a group of Slides furnished by members and representing residential, commercial, industrial, institutional projects. Some very interesting subjects were shown and discussed.

Action is progressing on State Senate Bill No. 101, known as the Architects' Registration Act and is being sponsored by the Washington State Chapter and the Spokane Chapter.

* * *

About sixty forms have been returned on the Small House Plans Bureau and are now under consideration of the Fee and Professional Practice Committee, who will soon make a report.

* * *

The Bowling Team of Stuart & Durham have taken the lead in the league standing nosing out the team of Naramore, Bain Brady & Johnson by a series of exceptional games recently.

* * *

President Waldo Christenson was a recent visitor in Washington, D. C., in conjunction with membership on the Institute Committee on Standard Accounting Methods for Architects.

* * *

NEW MEMBERS: John H. Whitney is a new Corporate Member. Bernard A. Carmin, William M. Svensson, Roland E. Wilson, Wendell H. Lovett, Gilbert M. Wojahn, and George H. Engebretson are new **ASSOCIATES;** Joe Duletsky is a **JUNIOR**

(See Page 35)

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Steve Barnes, President; Harry W. Bolin, Vice President; Lewis K. Osborn, Sec-Treas. DIRECTORS, Richard W. Ware, Geo. E. Brandow, L. T. Evans, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

PRESIDENT AMERICAN SOCIETY OF CIVIL ENGINEERS FOR 1949

Franklin Thomas, Professor of Civil Engineering and Dean of Students at California Institute of Technology, Pasadena, has been named President of the American Society of Civil Engineers for 1949 as the result of a mail ballot conducted among the organization's 24,000 members.

Professor Thomas, together with new Vice Presidents Henry J. Sherman, Camden, N. J. and Robert B. Brooks of St. Louis; and new Directors Waldo G. Bowman, New York; Morris Goodkind, New Brunswick, N. J.; Harold L. Blakeslee, New Haven, Conn.; Paul L. Holland, Baltimore, Md.; Edmund Friedman, Miami, Fla.; and Professor Sidney T. Harding, University of California, Berkeley, was inaugurated at the opening sessions of the 96th Annual Meeting of the engineering organization in New York.

Awards awarded at the sessions included:

Alfred M. Freudenthal, New York consulting engineer and educator, the Norman Medal, for his paper, "The Safety of Structures."

Karl deVries, Bethlehem Steel Company, Bethlehem, Pa., the J. James R. Cross Medal for his paper, "Strength of Beams as Determined by Lateral Buckling."

M. M. FitzHugh, Newport News Shipbuilding and Drydocking Company, James S. Miller, Vice-President and Director of the Dravo Corporation of Pittsburgh, and Professor Karl Terzaghi, Harvard University Graduate School of Engineering, the Thomas Fitch Rowland Prize for their joint paper on, "Shipways with Cellular Walls on a Marl Foundation."

Hyde Forbes, Palo Alto, Calif., consulting engineer, the James Laurie Prize for his paper, "Landslide Investigation and Correction."

Joseph Barnett, Chief, Urban Road Division, Public Roads Administration, Washington, D. C., the Arthur M. Wellington Prize for his paper, "Express Highway Planning for Metropolitan Areas."

Professor John K. Vennard, Stanford University, Palo Alto, Calif., the Collingwood Prize for Juniors for his paper, "The Nature of Cavitation."

Professor Charles Edward Jacob, University of Utah, the Rudolf Hering Medal for his paper, "Drawdown Test to Determine Effective Radius of Artesian Well."

Preston T. Bennett, Corps of Engineers, Omaha, the J. C. Stevens Award for his discussion of T. A. Middlebrooks' paper, "Relief Wells for Dams and Levees."

Professor George Winter, Head of Cornell University's Structural Engineering Department, the Leon S. Moisseiff Award, for his paper, "Strength of Thin Steel Compression Flanges."

C. Glen Cappel, New Orleans consulting engi-

PREVENT FIRES and EXPLOSIONS *Caused by* EARTHQUAKES!

Plus a Manual Control For Other Emergencies!

SAFETY ENGINEERS and scientists say the Sentinel is the most accurate and dependable earthquake actuated shut-off valve in the world!* On the job 24 hours a day! A record of more than 10 years of reliable service . . . ***proven*** during a period which included two major seismic disturbances. * Names on request

Indispensable in live seismic regions.
•
Recommended for use with Liquified Petroleum Gases.
•
Thousands installed in the United States.
•
List of installations available on request.
•
Available at leading wholesale plumbing establishments.
•
Indorsed by National Bd. of Fire Underwriters.
•
Leading Fire Prevention Engineers Approve.

Take No Chances . . . Install The

SENTINEL

AUTOMATIC GAS SHUT-OFF VALVE

Designed to shut off automatically when there's an earth shock or explosion sufficient to damage buildings or pipe lines. Listed by the Underwriters' Laboratories and specified by leading architects and engineers for installation in schools, fire stations, factories, theaters, churches, stores, municipal, military and utility buildings. A. I. A. File No. 29-F-6

Write for illustrated folder.

SECURITY VALVE CO.
410 San Fernando Rd., Los Angeles 31, California
Phone CApitol 6191

neer, the Construction Engineering Prize for his paper, "Steel H-Piles and Pipe Bents Support Deep Water Drilling Platform."

In addition, two American Society of Civil Engineers members received national engineering awards: Malcolm Pirnie, New York consulting engineer, the Hoover Medal, and Professor Charles Metcalf Allen, Worcester Polytechnic Institute, the John Fritz Medal.

AMERICAN SOCIETY OF CIVIL ENGINEERS—S. F. SECTION

Dr. Paul L. Magill of the Stanford Reseaerch Institute spoke recently on "Some Engineering Aspects of the Los Angeles Smog Problem" redating some recent engineering investigations towards combating the air pollutioin problem in the Los Angeles area, and illustrated his remarks with slides.

NEW MEMBERS. The following have become subscribing members to the San Francisco Sectoion: John B. Alexander, Erik Rettig, Thomas J. Stephenson. Associate Members: Jack R. Benjamin, Harry S. Braun, Frederick R. Brown, Jr., and Frank L. Lucas. Juniors: Harold P. Cahill, J. E. Delehanty, Howard P. Grant, Elwyn H. King, Thomas E. Kinney, Jr., Jack H. McMinn, James L. Sherard, William L. Simons, Herbert W. von Colditz, Raymond Walsh, George E. Wickham, James D. Wilson, and Roy J. Zimmercaan.

PUGET SOUND CHAPTER AMERICAN SOCIETY FOR METALS

A recent meeting of the Puget Sound Chapters of ASM w.a.s. a joint meeting with the American Welding Society, held at the Engineer Club, Seattle. Dr. Paul Theisenger, Manager, Technical Plate Sales, of Luken Steel Company, Coatsville, Pa., was the principal speaker. His subjevt,, "The Manuaftcure, Fabrication, and Application of Clad Steele," included a moving picture and slides.

* * *

A joint meeting of the San Francisco Engineering Council and the American Institute of Chemical Engineers recently, heard Dr. J. E. Hobson, Executive Director of the Stanford Research Institute, speak on the subject "The Role of Research in the Development of Western Industry."

* * *

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The Structural Engineers Association Association of Southern California held their first meeting of the new year on the evening of January 5. The newly elected officers of the Association are: Harry W. Bolin, President; Ernest Hillman, Vice President; and Robert Short, Secretary-Treasurer. Newly chosen members of the Board of Directors are: S. B. Barnes, Past President; Lewis Osborne, and John Case. Carry-over members of the Board are Harold P. King and Donald F. Shugart.

The business part of the meeting was taken up with the appointment of new committees. Special emphasis has been placed on cooperation between all members of committees and with particular emphasis to those committees working on current developments and Building Code changes.

Following the business session, Dr. Irving P. Krick presented a highly instructive and informative address on "Weather and the Construction Engineer". Dr. Krick is recognized as an international figure in modern weather forecasting. He has been the principle advocate of "mass analysis" in its application to long-time weather forecasting. That this can be of considerable advantage to the construction industry in the design, estimating and construction periods was pictured by Dr. Krick. As an interesting sideline Dr. Krick also presented the story of the only successful attempt-at-artificial-rain-making experiment carried out on an extensive scale. This experiment was performed in Arizona during the summer months and rates as extremely successful.

* * *

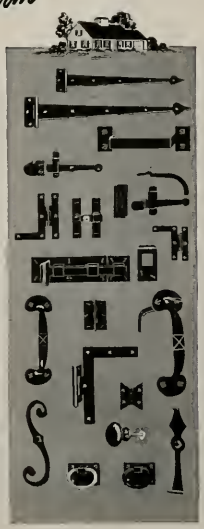
At a meeting of the Structural Engineers Association of Southern California held early this month an interesting paper on "STRUCTURAL WELDING

(See Page 35)

For added charm in Any setting

USE STANLEY BLACK ORNAMENTAL HARDWARE!

Stanley Black Ornamental Hardware was inspired by Colonial and Early American pieces. It is ideal not only for summer camps, lodges and guest houses, but also for single and multiple family dwellings, apartments and private executive offices. Your customers will appreciate the extra beauty of Stanley Black Ornamental Hardware. Recommend it! Send for descriptive folder now. The Stanley Works, New Britain, Conn.



STANLEY

Reg. U.S. Pat. Off.

HAROWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

PRUDENTIAL INSURANCE

(From Page 20)

Executive offices and dining room lead onto a glassed-in corridor with a view of the patio court, while the two committee rooms lead directly onto it. The reception room is finished in light cocoa beige and panelled in Narra, joining the elevator foyer with corridors leading to the executive offices. The committee or conference rooms, dining rooms and executive offices are panelled for the most part in bleached oak. Rich tones of green are used, reflecting the ornamental planting of the outdoor patio court.

H. G. Cary Company

Plumbing and Steam Heating

825 Venice Boulevard

Los Angeles 15, California

Prospect 2028

Plumbing Contractors

for the

PRUDENTIAL BUILDING

Work for Prudential Building
Exterior Roman Travertine, Greenstone and Green Slate
Interior Roman Travertine and Marble

Bruner Marble & Tile Company

Contractors, Manufacturers & Finishers
Alberene Soapstone Laboratory Equipment

1012 Architects Building
816 West Fifth Street **Los Angeles 13**
MIchigan 3817

WE ARE PROUD TO HAVE BEEN CHOSEN
TO FURNISH AND INSTALL THE

High and Low Pressure Boilers,
Steam and Chilled Water Piping Systems,
Controlling and Recording Instruments,

ALL OF WHICH CONTRIBUTE TO MAKE THE

Prudential Building

AND OHRBACH'S DEPARTMENT STORE
THE LAST WORD IN COMFORT

F. D. REED PLUMBING COMPANY

Plumbing, Heating, Ventilation Engineers

Established 1916

217 N. MADISON AVE. LOS ANGELES

FEderal 1159

ACOUSTICAL TREATMENT

For

PRUDENTIAL

Furnished by

SOUND CONTROL CO.

(New Address)
2733 Riverside Drive
Los Angeles
NOrmandie 3-3211

—:—

Complete Acoustic and Soundproof Engineering

WITH THE ENGINEERS

(From Page 33)

INSPECTION WITH MAGNAFLUX" was presented by Mr. Lloyd J. Oye. The paper and the discussion that followed indicated a considerable interest in the problems of the welding industry in relation to frame structures.

The largest turn-out in the history of the Association was recorded when approximately two hundred members were present for the dinner, business session and the talk.

Mr. Harry Bolin, President of the organization presided.

A.I.A. ACTIVITIES

(From Page 31)

ASSOCIATE, and John W. Dickinson, **STUDENT ASSOCIATE.**

NORTHERN CALIFORNIA CHAPTER

Entries for the National Honor Awards were exhibited at the February meeting, with variety of subjects shown, and final plans for participating in the Home Show to be held in San Francisco's Civic Auditorium were made.

President Kirby urged that the Chapter be well represented at the National Convention in Houston, Texas.

SOUTHERN CALIFORNIA CHAPTER

Reports of outgoing officers indicate a rapidly increasing Chapter activity and membership in the A.I.A. throughout southern California. Much of this is due to establishment of new chapters and formation of junior and governmental cooperative activities, according to the President's report.

* * *

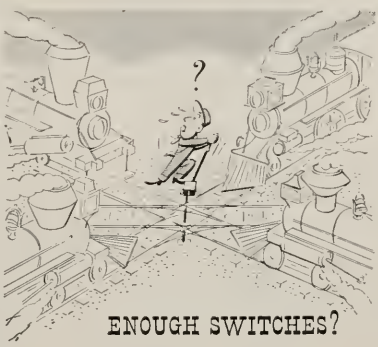
Dr. Louis C. McCabe, Los Angeles County Air Pollution Control Director calls attention to a new regulation which requires a permit for construction of any equipment which might emit smoke, gas, or dust.

* * *

NEW MEMBERS: Institute Members include Thomas C. Anthony, Arthur C. Metcalf, W. Francis Parsons, Norman L. Pedersen, H. Hubert Stegman, J. Warren Wright, William Cody, Stewart Granger, Kenneth Johnson, and Bary Frost. JUNIOR ASSOCIATE, Howard R. Lane.

CHANGE FIRM NAME

The partnership of Roselyn & Gartner was dissolved February 1, 1949 and the architectural work of the firm will be carried on by LLOYD GARTNER, Architect, A.I.A. at 821 Market Street, San Francisco, California.



ENOUGH SWITCHES?

You're on the right track when you specify Certified Adequate Wiring for the homes you plan. Here's the reason why.

Certified Adequate Wiring means your clients will have enough electric switches in the right places to enjoy the most convenient use of lights, motors and appliances. And you know that satisfied clients mean better business for you in the days and years to come.

Adequately wired homes command premium resale prices, too. Banks recognize added equity in these homes. For new homes . . . for renovations . . . specify Certified Adequate Wiring to assure top quality wiring at only slightly greater cost.

—:—

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street San Francisco 3

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK
Specify it in your home
Available through Lumber Dealers
LOS ANGELES
601 W. 5th Street
Phone MIchigan 6294
SAN FRANCISCO
333 Montgomery Street
Phone DOuglas 2-3883
J.H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.

QUALITY building material COSTS YOU LESS

E. K. WOOD LUMBER CO.
GENERAL OFFICES P. O. Box 1618, Oakland, Calif.
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

HEADLINE NEWS & VIEWS

By E. H. W.

The greatest contribution Congress could make to the stabilization of our economy and lower prices, would be a vigorous pruning of inflated government expenditures.

* * *

Steelmaking capacity of the steel industry at 96,000,000 tons per year, is now greater than ever before in war or peace, and further large expansion is planned during the next two years:—Walter S. Tower, Pres. American Iron & Steel Institute.

* * *

Construtcion has begun on the University of California at Los Angeles' third major postwar building—unit A of the Engineering Building, which will be 220 feet long and 80 feet wide and will cost $1,250,000. * * *

AMERICAN farmers have spent more than $7-billion since the beginning of 1940 in modernizing and replacing their homes and other farm buildings.

* * *

FIVE Million veterans and their dependents have been provided with new homes under the G. I. home loan plan alone. The average price they paid for homes $7,600.

* * *

DESPITE the fact that the cost of everything has increased, the monthly payments for homes are less today than they were 15 years ago.

* * *

THE American Medical Association's 140,000 members, assessed $24, raised a $3,500,000 fund to be used in fighting adverse national legislation. The Doctors should take their cue from labor unions that in many instances have far greater sums of money for purely local uses.

* * *

Expenditures for public works by federal, state, and local governments broke all peacetime records in 1948, totalling $4-billion:—Melvin H. Baker, Chm. Const. Ind. Info. Comm.

* * *

The Department of Commerce has just issued a study on retail sales that will be of interest to every retail merchant. Entitled "Retail Sales and Consumer Incomes," it is an updating of a similar study made just after the war ended.

* * *

"NEVER before have so many bills proposing so many unnecessary and unsound things been introduced in such short space of time by so many Members of Congress";—National Association of Home Builders.

IN THE NEWS

OUTHWEST SKYSCRAPER ONFERENCE

Owners, managers, and archi-ects of some of the Southwest's ost eminent commercial struc-ures spoke before the 18th Annual outhwest Conference of the sky-craper industry in Dallas, Texas, ecently.

The program covered all phases f design, construction, ownership, nd management of office and ommercial buildings as well as perating problems.

Featured speaker was J. Clydes-ale Cushman, New York, Presi-ent of the National Association of uilding Owners and Managers.

ENTENNIAL

The Park Commission of San rancisco has awarded a $38,227 ontract to Elvin C. Stendell, San rancisco, for the construction of hree Centennial Buildings to be rected in Portsmouth Square.

The buildings are being de-igned by Leonard S. Moaias, Ar-hitect, San Francisco.

NEW MARKET. Don A. Younger, an Francisco, has been awarded $50,000 contract for the construc-ion of a 1-story reinforced concrete arket building in Willits, Calif. . M. Fnale. San Francisco, is the tructural engineer.

HEATING PLANT. The Napa ollege District has awarded a ontract to the Harold Beasley ompany of Vallejo for the instal-ation of a heating plant at the unior College at a cost of $24,997.

ENO HOTEL

Etcheberry Bros., Reno, Nevada, ave been awarded a $170,000 ontract for the construction of a estaurant and bar, five stores, nd a 22-room Santa Fe Hotel in eno. Russell Mills, Reno, is the rchitect.

OILER ROOM

The Samuel Barth company of an Jose has been awarded a 363,500 contract for the construc-ion of a gymnasium and dressing oom building and a new boiler oom at the Abraham Lincoln High chool, Santa Clara county.

Binder & Curtis, and Ralph Vyckoof & Edward W. Kress are he architects.

Constellation
SLIMLINE FLUORESCENT LUMINAIRE

OFF TO A GOOD START!

The skill, the know-how, the modern equipment this sheet of steel will encounter in the Smoot-Holmon plant will accomplish an amazing transformation. By the time it emerges as a completed luminoire, it will have undergone exhaustive tests and processes of inspection — a product of which we can be proud... and with which the user will find long-lasting satisfaction.

SMOOT-HOLMAN COMPANY
SMOOT-HOLMAN
INGLEWOOD, CALIFORNIA
MADE IN U.S.A. ®

Offices in Principal Western Cities—Branch and Warehouse in San Francisco

FOR '49
THE COMPLETE
HOT WATER LINE...

featuring...

THE
MUSHROOM
BURNER

Condensation will never clog the side ports of this new burner. It is designed to give more heat.. faster...for a longer time.

THE
GLADIATOR with the all-over white exterior is now made in 50 and 75 gallon capacity sizes with 120 gallons per hour recovery on LPG or manufactured gas... 141.3 with natural gas. Only one of the complete line...

Continental
WATER HEATER CO.
1501 Pasadena Avenue,
Los Angeles 31, California

All models are approved by A.G.A. for LP, Natural and Manufactured Gases

MASS TRANSPORTATION

(From Page 21)

Fe and the Western Pacific could also use the station.

2. A BRIDGE TO OAKLAND PIER

A line connecting the city halls of San Francisco and Oakland crosses the Embarcadero at the foot of Brannan Street, and therefore the bridge location shown on the plan would serve the two cities in a most direct manner. The bridge would be for mass transportation only. The lower deck would have four tracks; two for the interurban lines and two for main line passenger and freight traffic. The upper deck would be used by buses and trucks only. The bridge will connect with the rail lines north and south from the Oakland Pier, and with the North Shore and the new East Shore freeways. The bridge should be designed for faster suburban train operation than is possible over the existing bridge, where the sharp vertical curves limit the safe speed to 35 miles an hour. As the proposed bridge will more effectively serve the purposes of rapid transit, the tracks can be removed from the existing bridge and it can be converted into a two-level highway bridge. The bridge will permit the Harbor Belt Line to be connected with the continental side of the Bay. It will also give direct rail connections to the Santa Fe and the Western Pacific, which now depend on car ferries for freight. There are several reasons why a bridge is favored over a tube; no ventilation is required and therefore diesel engines could be used; a large capacity is more readily obtained; also, the approaches are more practicable. A single large span for shipping will serve both the Oakland Estuary and the lower Bay. The bridge as proposed would have a vertical clearance for navigation of 135 feet. This is the standard clearance for New York Harbor.

3. A MARKET STREET SUBWAY

The interurban tracks from the Peninsula and from the bridge to the Oakland Pier would connect directly with a subway in Market Street. The transition from bridge to subway would be effected by passing under Rincon Hill via First Street. The resulting grades and curvature are well within the limits permissible for rapid transit lines. By passing under Bush Street to Kearny Street, the financial district along California and Montgomery Streets will be more conveniently served than by turning directly into Market Street from First Street. The ultimate 10-car stations are shown, although it is possible that 5-car stations would prove to be adequate for several decades. A continuous mezzanine concourse over a four-track subway in Market Street would be the ideal arrangement, as it would permit continuous pedestrian movement under shelter, both along and across Market Street, and would include direct access to the basements of the

(See Page 40)

IN THE NEWS

STATE WORK

The State of California, through the Division of Architecture has announced the awarding of work to the following architects:

Peter L. Sala, Stockton, branch State Department of Employment building, Stockton; Confer & Willis, Oakland, Mt. Diablo State Park Museum, Contra Costa county; Pollack & Pope, San Francisco, Museum Building with living quarters at Donner Monument near Truckee, California; and Confer & Willis, Oakland, recreation building at Castle Crag State Park near Dunsmuir.

NEW EVAPORATIVE CONDENSOR

Many improvements in design and fabrication are included in the new line of Evaporatve Condensers announced by The KENNARD CORP'N of St. Louis, Mo.

Ranging in weight from 3 to 50 tons, featured improvements include: Penta-Post Frame members, prime surface coils with copper tubes hydraulically expanded at 3000 psi into copper tube sheets with ferrule-collars, and many others. Complete information from the manufacturer.

CAR HOUSE

The Public Utilities Commission of the City and County of San Francisco has awarded a general contract to Wm. Horstmeyer, San Francisco, for the remodeling of the Potrero Street Car-House to be used as a trolley coach service building at a cost of $577,449. H. J. Brunnier, San Francisco, is the Engineer.

HOUSING COMMITEE

The San Francisco Chamber of Commerce has established a Regional Housing Committee composed of labor, supply, government, finance, and building, according to an announcement by Henry E. North, President of the Chamber.

The primary purpose of the Committee for the immediate future will be to develop a program of economy housing for the area.

RESIDENCE

Architect John D. Young of San Francisco is doing a residence in Hillsborough which will cost $41,-704. J. W. Osborne & Son, Palo Alto, is the contractor.

HOTEL ADDITION

The Jack Brown Construction Company of Santa Cruz has been awarded a general contract for the construction of an addition to the Del Mar Hotel in Santa Cruz to cost $37,000.

MARKET BUILDING

An 80 ft. x 100 ft. concrete block and frame and stucco Market Building is being constructed at the San Lorenzo Village, Alameda County, at a cost of $100,000. In addition, a Store Building is being built in the same Shopping Plaza area.

ALWINTITE

Aluminum Double–Hung Windows for Residental Construction ...embody many exclusive, patented features formerly found only in expensive, custom–built windows

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Where to plan portable telephones in new homes

Thoughtful builders plan outlets for portable telephones for rooms used occasionally or at certain seasons—like basement playrooms and glassed-in porches. But they provide for permanent outlets in rooms where customers spend most of their time. Built-in conduit and outlet boxes make it simple to add portable and permanent telephones later.

Attractive walls are never marred by exposed wiring when you plan built-in outlets and conduit. These facilities for concealed wiring are easy to install during construction and means customer-convenience at a very low cost. For free help in planning, call your local Pacific Telephone office and ask for "Architects and Builders Service."

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.
SAN FRANCISCO, CALIF. HEMLOCK 4100

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco - DO 8311

MASS TRANSPORTATION

(From Page 38)

stores. The longer stations would tend not to favor particular merchants or localities, and the main entrances from street level would preferably be at the ends of the blocks from the numbered cross streets. The stores could have show windows both above and below street level. Excess mezzanine space could be leased for concessions. Although for the first step, the subway could terminate in inclines west of Van Ness Avenue, the plan would be to have two tracks extend through the Twin Peaks Tunnel and down the Peninsula, utilizing the "M" Line right of way and the right of way which the City owns in San Mateo County, for the development of a high-speed line. The two south tracks in the Market Street subway would turn south at Van Ness Avenue utilizing the Mission Freeway as recommended in the De Leuw report, as an alternative route down the Peninsula, and also possibly connecting with the Twin Peaks line as an outer collecting loop, with a bus transfer station near the county line, for buses using Highways 1, 5, and 101. The plan does not interfere with a subway for buses in Post Street recommended in the De Leuw report but rather will facilitate its construction. The Bush Street section would be two-level. The transition from two-level to one-level would be made at the turn from Kearny Street into Market Street and also at First and Harrison Streets. The mezzanine concourse arrangement also permits certain streets to cross Market Street with separated grades. As a first step, construction could be considerably reduced, but no construction based upon expediency should be undertaken unless it fits into the long range program. A subway in down-town Market Street when built, should be considered primarily as a street widening and suburban terminal development.

4. MISSION PARKWAY (MINNITOMA PROJECT)

This project, described in an article in the "Architect and Engineer" for August, 1945, was endorsed by the Central Council of Civic Clubs. As shown on this plan, the street is delineated as a parkway patterned after the Avenue des Champs Elysees in Paris. The side portions are broad promenades and only the center portion, 100 feet wide, is open to vehicular traffic. This will reduce the interval for cross traffic, and as the blocks are unusually long, 825 feet, continuous flow at a fair rate of speed is assured without unduly blocking the cross streets. It is thought that this arrangement at grade, is far superior to any elevated or depressed arrangement, and that the abutting property will be enhanced far above its present value. This will more than compensate for any loss in taxable values from the properties displaced, as the pres-

(See Page 43)

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—

Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$60.00 to $90.00 per M, truckload lots, delivered.

Cartage—Approx. $9.00 per M.

BUILDING PAPER—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.80 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.

Sash weights, cast iron, $100.00 ton.

Nails, $5.50 base.

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock ¼" to ¾"	2.38	2.94
Crushed Rock, ¾" to 1½"	$2.38	$3.13
Roofing Gravel	2.81	3.50
River Sand	2.50	3.06
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.02 per bbl. f.o.b. car; delivered $3.60.

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White Medusa White	1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. 3/16"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak— T & G

⅝ x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

⅝ x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

⅝" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .40 per □ ft.
Double Strength Window Glass	.60 per □ ft.
Plate Glass, under 75 sq. ft.	1.50 per □ ft.
Polished Wire Plate Glass	2.25 per □ ft.
Rgh. Wire Glass	.60 per □ ft.
Obscure Glass	.40 per □ ft.

Glazing of above is additional.

Glass Blocks—$2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—

Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common..... $85.00 per M
No. 2 Common..... 83.00 per M
Select O. P. Common..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	18c to 20c per ft.
Plyscord	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$13.00 per square; No. 2, $10.50; No. 3, $9.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—Tapered: ½ " to ¾" x 25"—$17.00 per square.
Resawn: ¾" to 1¼" x 25"—$22.00 per square
Average cost to lay shakes,— 8.00 per square

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

MARBLE—(See Dealers)

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine..... $1.85 per gal. in 5-gal. cont.
Raw Linseed
Oil..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed
Oil..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement
Oil..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hat roll channels metal lath (lathed only)	3.00
Seilings with ¾ hat roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅛"—29c per sq. yd.

Composition Stucco—$4.00 sq. yard (eplied).

PLUMBING—

From $175.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
Redwood Shingles, $15.00 per square in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ..... $18.25 square
5/8 x 16"—#1 Cedar Shingles, 5" Exposure ..... $18.00 square
4/2 #1-24" Royal Shingles, 7½" Exposure ..... $23.00 square
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $24.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $29.00
1 x 25" Resawn Cedar Shakes, 10" Exposure 22.00

Above prices are for shakes in place.

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvenized iron, 65c sq. ft. (flat).
Vented hip skylights 90c sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill
$270 per ton erected, when out of stock

STEEL REINFORCING—

$200.00 per ton, in place.

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.70 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$1.85 per sq. ft.
Asphalt Tile Floor ⅛" x ⅜"—$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—

Glazed Terra Cotta Wall Units (single face laid in place—approximate prices:

2 x 6 x 12	$1.25 sq.
4 x 6 x 12	1.50 sq.
2 x 8 x 16	1.45 sq.
4 x 8 x 16	1.75 sq.

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

MASS TRANSPORTATION

(From Page 40)

ent assessed values are only about 1 60 of those along Market Street. It is a mistake to overload one street in a city of 800,000 persons, as is the case on Market Street at present, and a broadening of the terminal area is essential.

5. FREEWAYS

The Mission Parkway could extend out through the Mission District either as a parkway or a freeway. The inner end of the Mission Parkway would connect with a freeway parallel with Third Street, along the base of Rincon Hill, passing under Third, Howard, Folsom, and Harrison Streets, and over Bryant, Brannan, Townsend, King, and Berry Streets. It is proposed that no connection be made with the existing Bay Bridge approach, but that the freeway would extend as shown, to connect with the proposed Army Street Bay Crossing. The connection to the proposed bridge to the Oakland Pier is not intended to be used for general traffic, but only for scheduled passenger and freight operations. It is proposed to fill Channel "Street" at least as far as Fourth Street.

6. FINANCING

It has been frequently stated that the volume of traffic would not justify the expenditure for a union terminal in San Francisco. For the same reason it could be authoritatively stated that a Market Street subway would not be justified, inasmuch as it takes a volume of traffic many times as great for a subway as for a surface line, to pay its way, and at present the surface lines do not pay. Also, in San Francisco is could be argued that inasmuch as San Francisco is a terminal city, traffic counts would show that the volume of through traffic would not justify the expenditure for freeways connecting the Golden Gate and Bay Bridges. While the laws of

BUILDING TRADES WAGE (JOB SITES) NORTHERN AND CENTRAL CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U.S. Department of Labor. (Revised to November 1, 1948.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Marin	Sacramento	Santa Clara	San Mateo	Solano	Stockton	Watsonville
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	2.81¼	3.00	2.81½	2.81¼	2.05*	3.00
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.25	2.00	1.75	2.25	2.25	1.60*	2.25
CARPENTERS	2.16	2.16	2.12½	2.12½	2.16	2.12½	2.12½	2.16	2.12½	2.12½	2.12½
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.25
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
ENGINEERS: MATERIAL HOIST	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½
PILE DRIVER	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.52½	1.42½	1.52½	1.52½	1.52½	1.42½
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.52½	1.42½	1.52½	1.52½	1.52½	1.42½
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.81¼	2.00*	2.50*	2.81¼	2.81¼	2.81¼	2.50*
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.25*	2.25*	2.50*	2.81¼	3.00
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.00*	2.00*	2.25*	2.16	2.50
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
ROOFERS	2.16	2.16	2.16	1.87½	2.16	2.00	2.00	2.16	2.16	2.25	2.25
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.12½	2.12½
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81¼	2.81¼	2.81¼	2.81¼	2.05*	2.81¼
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.67	2.00	2.67½	2.67½	2.67½	2.43¾	2.67½

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:
CENTRAL CALIFORNIA CHAPTER, ASSOCIATD GENERAL CONTRACTORS OF AMERICA
with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

CONSTRUCTION ENGINEER
(CIVIL)
GENERAL SUPERINTENDENT
PROJECT MANAGER

Twenty five years of wide practical experience on frame, steel, concrete and masonry bldgs. of all types. Estimating, sub-division, sales, detailing & specification writing background. Dependeble, energetic. Excellent local references. Have car. Free to travel. P.O. Box 807, San Meteo, Calif.

WANTED: Product Engineer with experience wanted as a permanent addition to the staff of an industriel Development Department located in Minnesota. Work involves product development including travel for consumer contacts. Program relates to products from wood. Submit details education, experience, references, salary requirement, photograph. All replies considered confidentiel and will be acknowledged. Reply Box 238, Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

ENGRAVING—Good engravings are essential to a satisfactory job of printing reproduction. For the best, see Poor Richard Photo Engraving Co., 324 Commercial St., San Francisco.

WANTED: Top architectural designer, renderer, draftsman of ability, by long established central western office.

Modern designer with background of historical architecture.

University graduate, European travel and study, or training at American Academy of Rome.

Good background, initiative, diplomatic, pleasing personality.

Prospective future partnership.

Furnish complete information, references. Box 110, Architect & Engineer, 68 Post St.

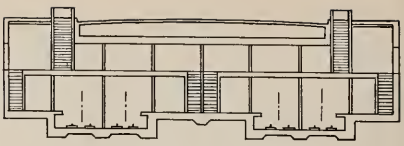
PHOTOGRAPHY: Building, Construction, Publicity, Aerial photographs by thoroughly experienced Photographers. Black & White, Color, Stills and Motion Pictures. DEB Photos, 929 Hearst Building, San Francisco.

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

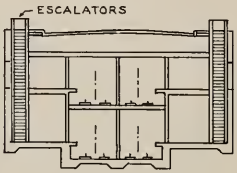
SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

TERRAZZO
for Floors and Wainscoting in Hospitals, Theaters, Hotels, Office Buildings, Schools and Stores.
DECORATIVE • DURABLE • SANITARY
FOX TILE CO.
3247 E. 14th Street, Oakland
Phone: ANdover 1-0431

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440



MARKET STREET SUBWAY



TWO-LEVEL SUBWAY

TYPICAL SECTIONS AT STATIONS

economics should not be entirely disregarded, nevertheless due weight should be given for the intangible values. Daniel L. Turner, the distinguished transit engineer of New York City once stated: "City transit should precede the population, not follow it. This is the fundamental basis of proper transit development. The principle cannot be emphasized too strongly. The principle means providing transit service for the whole city area, not for the traffic immediately in sight, not for profits primarily. A tract without transportation is like an office building without elevators." Although the foregoing was stated by Mr. Turner over 25 years ago, it is essentially true today, even with the greater use of personal transportation. Private cars did not effectively solve the transportation problem at Treasure Island during the Exposition, even with unlimited parking space. In the financing therefore, mass transportation should be considered primarily as one problem, and all sources of revenue, government subsidies, gasoline taxes, etc., should be polled in order that most essential services may be provided first. At present, we build air terminals and highways, but expect the railways to do their own financing, while trying to meet competition. They are, however, public utilities and as such should form a vital part of our mass transportation system, even though it may be necessary to change our previous concepts as to their part in such a program. Under our free enterprise system the stockholders are entitled to a fair return on their investment. In embarking on such a program however, there is one fundamental fact which should not be obscured. The consent of the people directly affected should be obtained, not only for the general program, but for each part of it.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

THE SPECIFICATIONS AND LAW ON ENGINEERING WORKS. By Walter C. Sadler. John Wiley & Sons., Inc., 440 4th Avenue, New York 16. Price $5.00

A practical aid for the engineer not trained in law, provides a thorough foundation in engineering law for writing specifications, legal problems, and the historical significance of various legal systems. Many actual examples are used including the law on agency partnerships and corporations, patients and workmen's compensation. Also has examples of contracts, specifications, etc.

The author is Professor of Civil Engineering at the University of Michigan.

STANDARD SPECIFICATION AND SCALED DETAILS FOR INTERIOR MARBLE. By Marble Institute of America, 108 Forster Avenue, Mount Vernon, New York.

A handbook on Marble provides complete information for specifying interior and exterior marble, supplemented by illustrative plates, clearly describing Marble classifications, finishes, uses; recommends setting materials and procedures.

Publication includes, Marble Classification for Soundness, Handbook for use of Interior Marble, MIA Standard Specifications for Interior Marble and Specifications for the Support, Anchorage and Protection of Exterior Marble Veneer.

SIMPLIFIED DESIGN OF STRUCTURAL TIMBER. By Harry Parker. John Wiley & Sons, Inc., 440 4th Avenue, New York 16. Price $3.25.

A valuable handbook for builders and architects dealing primarily with wood members that support loads in buildings; full explanation of the principles of mechanics involved in design of these members. Many useful tables and practical examples and problems.

The author is Professor of Architectural Construction at the University of Pennsylvania.

EARLY CONNECTICUT MEETINGHOUSES. By J. Frederick Kelly. Columbia University Press, New York. Price $40.

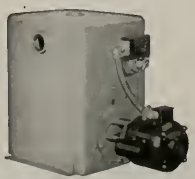
Is an account of the Church edifices built before 1830, contains 728 pages, 477 halftones and 205 line cuts. Every edifice is described historically and also technically.

In 1948, American citizens earned $224-billion from their national production—$22-billion more than in 1947.

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834
GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer
REPUBLIC STEEL
See Sweet's Catalog File or write us for full information.
REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO
DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. 5-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT
Pumping Machinery for Every Purpose

For Service Call DOuglas 2-6794 or MUtual 8322
SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

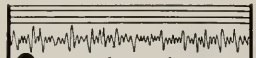
IN THE NEWS

ARCHITECT MOVES

Leslie I. Nichols, Architect, A.I.A., has announced the removal of offices to 627 University Avenue, Palo Alto, California. Telephone DAvenport 3-3871.

CAFETERIA

A general contract has been awarded to Thos. Ellingson of San Francisco for the construction of a $124,140 Cafeteria Building for the Reef - Sunset Union Elementary School District in Avenal, Kern County. Frank Wynkoop & Associates, Fresno, are the architects.



sound control surveys made without obligation

Gold Bond

SOUND CONTROL PRODUCTS

Made by National Gypsum Company

SOUND CONDITIONING FOR:

SCHOOLS . OFFICES
AUDITORIUMS . HOTELS
RESTAURANTS . THEATRES
HOSPITALS . FACTORIES

Whether your problem is the elimination of noise or the scientific acoustical treatment of interiors to provide better hearing conditions, we can recommend the type of installation and materials best suited for the job. A 'phone call will arrange a consultation at your convenience without cost or obligation.

VAN ARSDALE-HARRIS CO.
ENGINEERS & CONTRACTORS
Distributors
595 Fifth Street
San Francisco
EXbrook 2-4404

SEWAGE BONDS

Voters of the City of Concord, Contra Costa County, have approved a bond issue of $525,000 for the construction and installation of a Sewage Disposal Plant and sewers.

ARCHITECT SELECTED

Harry J. Devine of Sacramento has been selected as the Architect for designing a Lodge and Cabins to be built in the Calaveras State Park, Calaveras County.

ARCHITECT MOVES

H. W. Underhill, Architect, A.I.A., has announced the removal of offices to 4313 Leimert Blvd., Los Angeles 43. Telephone number is AXminster 1-9085.

NEW BUILDING OPENED—The Republic Supply Company of California, jobbers and manufacturers of industrial and oil well supplies, recently opened their new $1,250,000 home office and central warehouse in Los Angeles.

MARKET BUILDING

Conrad Roth, Alameda, has been awarded a $45,000 contract for the construction of a Market Building in Oakland for George A. Sturtevant. George Jennings, Berkeley, is the engineer.

DRIVE IN

Arthur S. Holmes & Son of Oakland, have been awarded a $54,500 contract for the construction of a concrete block, structural steel, Flagstone and Roman brick, and plate glass Drive-In Restaurant in Oakland. Kirby & Mulvin, San Francisco, are the architects.

STORE BUILDING

E. J. Denny of Madera has been awarded a $65,849 contract for the construction of a new store building in Madera.

David Horn & Marshall Mortland, Fresno, are the architects.

Russell A. Cullen Inc., of San Francisco, has been awarded a general contract for the construction of a $172,770 grammar school building for the Farmersville Elementary School District in Tulare County.

David Horn & Marshall Mortland, Fresno, are the architects.

ECONOMIC BUILDING

The Norlie Construction Co., of Chico, has been awarded an $87,780 contract for the construction of a combination exhibit and restaurant building at the 30th Agricultural District Fair grounds in Red Bluff.

PAROCHIAL SCHOOL

Harry J. Rilinger, Vallejo, has been awarded a general contract for the construction of a reinforced concrete and frame Parochial School building in Vallejo. Cost of the 8-classrooms, kindergarten, office, cafeteria and kitchen is approximately $181,823.

CATTLE BARNS

DaRoza-Ribal Inc., Seaside (California) has been awarded a $40,192 contract for the construction of two cattle barns at the Placer County Fair Grounds in Roseville.

Raymond R. Branceschi, Sacramento, is the architect.

SCHOOL BONDS

The Millbrae Elementary School District of San Mateo County have approved a bond issue for the construction of a new $136,000 Grammar School.

BATH HOUSE. Stolte, Inc., of Monterey, have been awarded a $48,000 contract for the construction of a stone and frame bath house for the City of Pacific Grove. Robert R. Jones, Carmel, is the architect.

ARCHITECTS MOVE

The architectural firm of BURNS, BEAR & McNEIL have announced the removal of offices to their new location, 2940 S. E. Belmont, Portland, Oregon.

Members of the organization include Architects Tom Burns, Wyman K. Bear, and Harold C. McNeil.

Yes, CABOT'S STAINS
Give Natural Beauty
To any design in any site

Colors that Stay True
A Superior Wood Preserver
Cost 1/3 as much as good paint

GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

STATIONERY
SCHOOL & OFFICE SUPPLIES

Printing Engraving
Announcements

CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

Fine ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO 11

IN THE NEWS

REJECT POOL

The Albany Unified School District, Albany, California, recently rejected a bid of $299,698 for the construction of a swimming pool and building at the Albany High School.

ARCHITECT SELECTED

Architect E. Geoffrey Bangs has been selected to design a new Juvenile Home in Oroville for Butte County.

REJECT BID

The City of Albany recently rejected a bid of $9,200 for cost of an addition to the Albany police station.

MAUSOLEUM ADDITION

Walter L. Steilberg, Architect of Berkeley, has designed a Chapel and 3-unit addition to the Chapel of the Chimes Columbarium and Mausoleum in Santa Rosa. Cost of the work will run $100,000 and Wm. D. Rapp of Santa Rosa is the contractor.

WATER ASSOCIATION NEWLY ORGANIZED

The National Association of Water Conditioning Equipment Manufacturers was recently organized in Chicago with an original membership of 53 firms.

Fred V. Hayner, Freeport, Illinois, was elected President; R. B. Baird of Dayton, vice president; and Herbert C. Angster, secretary-treasurer.

General offices of the new association will be maintained in Chicago.

A broad educational promotion program will be carried on through organized, Market, Engineer, and Publicity committees.

ARCHITECTS WANT PAMPHLETS

The recently formed architectural firm of ORR, STRANGE & INSLEE, 3142 Wilshire Boulevard, Los Angeles 5, are seeking Manufacturers' Catalogs and Literature.

The firm comprises Robert H. Orr, Architect, F.A.I.A.; W. T. Strange, Jr., Architect, A.I.A.; Robert R. Inslee, Architect, A.I.A., and Stewart S. Granger, Architect, A.I.A.

DINWIDDIE CONSTRUCTION COMPANY

BUILDERS

CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS. MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING • PLUMBING
REFRIGERATION

San Francisco
Oakland
San Jose
Los Angeles

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard

Interior Trim — Gutters

Special Moldings

The place to SAVE

is

LUMBER MANUFACTURING CO.

225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.

ALL TYPES CONSTRUCTION

SAN FRANCISCO - SACRAMENTO
OAKLAND - LOS ANGELES - DENVER

Index to Advertisers

ANGIER Pacific Corp. ..... *
ARCHITECTS Reports 40

BAXTER & Company, J. H. 36
BRUNER Marble and Tile Company. .. 34
BURKE, W. J. & Co. ..... *

CARY, H. G. Company. 34
CLARK, N. & Sons. ..... *
CLASSIFIED Advertising 43
CENTER Stationery 47
CENTRAL Electric Co. 28
CLINTON Construction Company. 44
CONTINENTAL Water Heater Co. 38

DETROIT Steel Products Co. 5
DINWIDDIE Construction Co. 47
DUFFY Tile Co. 48

ELECTROMODE Corporation 6

FORDERER Cornice Works. 40
FOX Tile Co. 44
FULLER, W. P. Co. ..... *

GLADDING, McBean & Co. ..... *
GUNN, Carle & Company. 46

HANKS, Inc., Abbott A. 48
HAWS Drinking Faucet Company. 30
HERRICK Iron Works. 47
HOGAN Lumber Company. 44
HUNT, Robert W., Company. 48
HUNTER, Thos. B. 47

JOHNSON, S. T. Co. ..... *
JUDSON, Pacific-Murphy Corp. 40

KRAFTILE Company 31

LUMBER Manufacturing Co. 48

MARBLE Institute of America. 2
MATTOCK, A. F. Co. 48
MICHEL & Pfeffer Iron Works ..... Inside Back Cover
MULLEN Mfg. Co. 47

NORTHERN California Electric Bureau 35

PACIFIC Clay Products Co. ..... *
PACIFIC Coast Gas Association. 1
PACIFIC Manufacturing Company. ... 45
PACIFIC Portland Cement Company ..... Back Cover
PACIFIC Telephone & Telegraph Co. 39
PITTSBURGH Testing Laboratory. 48
POOR Richard Engraving Co. 47

REED, F. D. Plumbing Company. 34
REMILLARD-Dandini Co. 48
REPUBLIC Steel Corporation. 45
RUSSELL & Company. 6

SCOTT Company. ..... 29 & 47
SECURITY Valve Company. 32
SIMONDS Machinery Company. 45
SIMPSON Logging Co. ..... *
SISALKRAFT Company 44
SMOOT-Holman Co. 37
SOULE Steel Company. ..... *
SOUND Control Company. 34
STANLEY Works, The ..... *
SUPERIOR Fireplace Company. ..... *
SWINERTON & Walberg Company. ... 48

TAYLOR Company, Halsey W. ..... *
TORMEY Company, The 47

U. S. Bonds. ..... Inside Front Cover

VAN Arsdale-Harris Co. 46
VERMONT Marble Company. 45

WESIX Company ..... *
WESTERN Asbestos Co. 39
WOOD, E. K. Lumber Company. 36

*Indicates Alternate Months

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company

ENGINEERS

Inspection • Tests • Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

TILE CONTRACTORS

Shower Doors, Tub Enclosures
Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

DUFFY TILE CO.

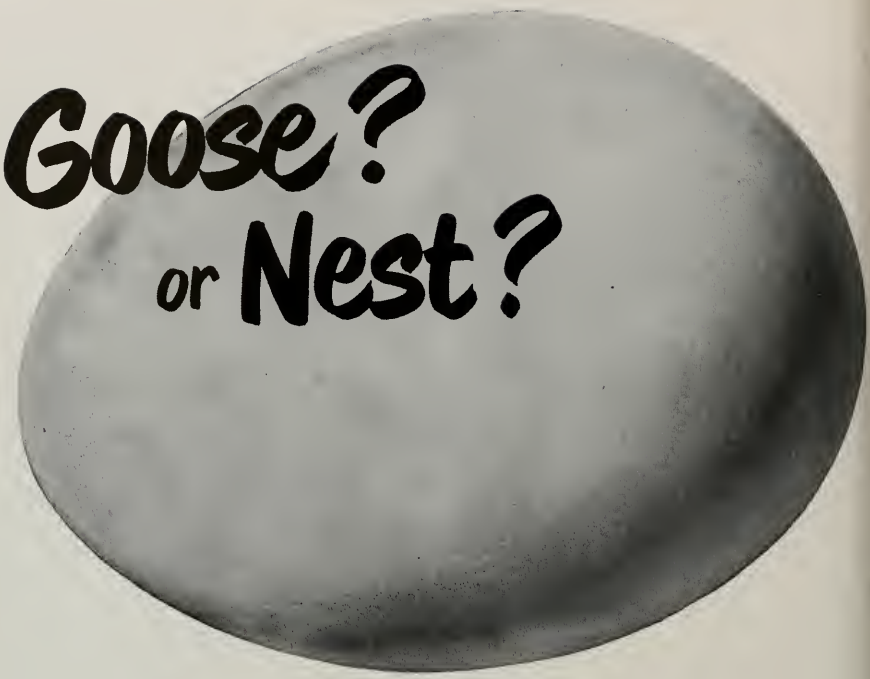
253 Minna St., S. F. YUkon 6-1489

ARCHITECT AND ENGINEER

ROSARY HIGH SCHOOL FOR GIRLS — San Diego, California

FRANK L. HOPE, ARCHITECT, A.I.A.

APRIL 1949



WHICH WILL YOU HAVE ?

For some reason, the goose egg stands for zero . . . nothing.

The nest egg, however, stands for a tidy sum of money, set aside for your own or your children's future.

It's hardly necessary to ask you which you'd prefer.

But it *is* necessary to ask *yourself* what you are doing to make sure you *don't* end up with a goose egg instead of a nest egg ten years from now.

The simple, easy, and obvious thing to do is to buy U. S. Savings Bonds.

Buy them regularly, automatically, on a plan that pays for them out of the month-to-month income you make today.

Millions of Americans have adopted this practically painless way to save up a nice nest egg for the needs and wants of the future.

In 10 years they get back $40 for every $30 invested in U. S. Savings Bonds—bonds as safe and solid as the Statue of Liberty.

There's a special Savings Bond Plan for *you.* Ask your employer or banker about it today . . . *and get started now.*

You'll soon realize that buying U. S. Savings Bonds *regularly* is one of the most important and comforting things you ever did!

Automatic saving is sure saving – U.S. Savings Bonds

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

• ARCHITECT AND ENGINEER

Vol. 177 No. 1

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★
COVER PICTURE:

AMONG the outstanding educational structures to be built on the West Coast is the "ROSARY HIGH SCHOOL FOR GIRLS" in East San Diego, California. An integal part of "OUR LADY OF THE SACRED HEART CHURCH", the school was designed and constructed under supervision of Frank L. Hope, Architect, A.I.A. of San Diego.

Photo by Gene Lyle

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for APRIL

EDITORIAL NOTES 2

NEWS & COMMENT ON ART 4

RESTORATION AND PLANNING OF BRITISH TOWNS 7
By RAGLAN SQUIRE F.R.I.B.A.

AN ARCHITECTS DREAM—THE EQUITABLE BUILDING, Portland . . 8
By ARTHUR W. PRIAULX

THE SQUARE CLASS-ROOM, EDMONDS GRADE SCHOOL Edmonds, Wash. 14
WILLIAM ARILD JOHNSON, A.I.A., Architect.

MOROCCO'S ARCHITECTURE 20
AS SEEN BY BORIS NEPO, Architect

ALTERATIONS—Clay's Store, Milwaukie, Oregon 28

A. I. A. ACTIVITIES 31

WITH THE ENGINEERS 32

PRODUCERS COUNCIL 34
By J. WILSON PEELE

HEADLINE NEWS & VIEWS 36
By E. H. W.

IN THE NEWS 37, 39, 46

ESTIMATOR'S GUIDE, Building and Construction Materials 41

BUILDING TRADES WAGE SCALES 43

BOOK REVIEWS & PAMPHLETS 45

INDEX TO ADVERTISERS 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office. Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

EDITORIAL NOTES

ARCHITECTURAL RESPONSIBILITY

Construction and architecture, and the numerous industries associated with them, must collaborate in a new type of research on the advances of science in order to improve their contribution to society, is the opinion expressed by Douglas William Orr, immediate past president of the American Institute of Architects.

Orr believes that "At this time, when need has never been greater, what is required of all is not a policy of containment, each in his own little cubicle, but a policy of expansion, broader thinking, deeper analysis, more imagination, more comprehensive knowledge of one another' problems, and greater coordination."

Although much fundamental and applied research is going on in laboratories and educational centers, and the A. I. A. endeavors to digest and correlate the findings of all these sources and distribute their recommendations to architects throughout the nation via State Council's and local Chapter's, there is insufficient research under way to discover means and methods of coordinating the various parts of the entire construction industry.

Probably much of the need expressed by Mr. Orr will be accomplished by formation of the Joint A. I. A.-A. G. C. Committee whereby contractors, manufacturers, and all elements of the Construction Industry will become design conscious, and structure conscious.

Such a Committee, working on a national level, as well as a strictly local level, should accomplish much during the next year.

* * *

LEGISLATION GOOD vs BAD

This is the time of year when business, industry, and professional thoughts should be seriously directed towards trends and activities of local state and national legislative sessions. It is more and more important each year that individuals give specific thought to what is taking place in the "marble halls" from which come the laws and regulations under which we must live and conduct our business or profession.

The time was when the slogan "Let George Do It" was quite fashionable insofar as the making of laws and actions of representatives of WE THE PEOPLE was concerned. When some drastic legislative control was adopted and your way of life was effected, it was an impossibility to find "George" and demand an accounting of his actions. "George's" name may have been changed to "Frank", or "Harry", or "What-Not" and there are some who wonder if the handy man "George" isn't factiously referred to as "Uncle Joe".

The all important factor of time has proven that there is no justification in confining one's political thinking to a careful consideration of the qualifications of candidates seeking public office, prior to election. Such political complacency is nothing short of disaster.

It is your own obligation today, and tomorow, and the day after tomorrow, to check throughly the basic thinking and trustworthiness of your political servants prior to their being elected and sent as your representatives to legislative bodies.

It is equally your responsibility, and just as essential, that you follow-thru after election and make certain that your concepts of those tried and proven principles which have resulted in America's becoming one of the greatest nation's of all times are safely preserved.

If you do not approve of what your servant does, you yourself are to blame.

* * *

HOUSING

A dramatic roundup of the unprecedented housing gains made in the United States last year, and since 1940, shows the public has been prodigiously busy exerting its will to obtain better housing, and more housing—and the building industry has delivered.

Purchasing power and production have again proven the desirability of performance under an unfettered American formula.

Far more families are living in well equipped houses, in good repair, than ever before, and far fewer families are living in substandard housing.

Official records will show that there has been a spectacular rise in the quality and usability of American housing during the past ten years. Through new construction, remodeling and repair and modernization more than 8-million nonfarm houses have been added to use, while numerous other major improvements have been added to housing facilities.

No one will claim there is not need for further housing, but, the records will show that never before has there been such an impressive record of accomplishment by private enterprise to meet a national need.

Incidently, the official records of numerous European countries whose housing problems have been under strict "government" regulation fail miserably in results obtained for the benefit of the people, when compared to the results obtained by free American enterprise.

Boys Town, Nebraska, equipped with 2,621 Fencraft Windows in the Administration Building (above), High School, Trade School, Reception Hall, Dining Hall and Cottages. *Architect:* Leo A. Daly Co., Omaha. *Contractor:* Peter Kiewit Sons Co., Omaha.

Your first trip to Boys Town, Sir?

Come in, won't you, and look around.

A famous and beautiful place, Boys Town. The warm, friendly feeling of gracious living you see in the rooms at your right means a lot to the boys who live here . . . a lot to the men who teach here.

At least a part of that feeling comes through the windows . . . Fenestra's* Fencraft Intermediate Steel Windows. Daylight and controlled fresh air are literally built into each room.

If you'd like to have the same qualities in your own buildings, here are some simple facts you'll want to know:

Fenestra's volume of production allows standardization of a *large variety* of windows—quality is high, cost stays low.

Beautiful Fencraft Windows are made of casement sections of advanced design—fabricated into 51 different Projected Windows, 14 Casement Windows and 36 Combination Windows.

All 3 types offer permanently-easy operation in any weather . . . weather-tightness . . . firesafety . . . low maintenance (they're Bonderized) . . . cleaning and screening from *inside.*

For full information on types and sizes, please mail the coupon, or see Sweet's section 16a/13. *®

The Dining Hall sunlit by dozens of Fenestra Casement Windows.

An office brightened by a bay of Fencraft Combination Windows.

A cottage made light and gracious by graceful Fenestra Casement Windows.

Detroit Steel Products Company,
Dept. AE-4,
1310 - 63rd St.,
Emeryville, Oakland 8, California

Please send me data on types and sizes of the new Fencraft family of Fenestra Windows.

Name_____

Company_____

Address_____

NEWS AND COMMENT ON ART

ANNUAL INTERNATIONAL DESIGN COMPETITION

Jurors for the Annual International Design Competition, sponsored by the American Institute of Decorators, have announced the winners for the 1948 event.

In the homefurnishing design classification First Award for woven fabric went to Harold W. Grieve of Los Angeles for his entry of a richly textured fabric which made new use of metallic thread to form a bold geometric pattern. The winning printed fabric design was won by Ruth Adler, while Don Smith of San Francisco was winner in the wallpaper category with his "Windmobile" design.

George Farkas of Miami Beach, won the lamp and lighting award.

Honorable mention was given to: Astrid Sampe Hultberg of Stockholm, Sweden, for a beautiful example of open-weave linen casement cloth; to Elsa Rengensteiner and Julia McVicker of Chicago for a lace weave boucle yarn curtain fabric of cotton and linen; and to the Owens Corning Fiberglas Corp. for development of a fiberglas marquisette which despite its sheerness retained a quality of scale and texture.

In printed fabrics, honorable mention was given to: Josef Frank of Sweden for a bold modern-provincial citrus design; to Ben Rose for a Modern geometric printed on nylon; and to Keith Gilchrist of Chicago for an unusual irregular fretwork block-design printed on linen-finish rayon. Estelle and Erwine Laverne were also cited for their "Fun to Run" rhythmic print on gold lamé; and Edith and William Hernandez for an abstraction of primitive tropical motifs printed on shantung.

In wallpapers, Victor Proetz's sculptured plastic paper "Notion Two" was runner-up to the winner and was specially commended for new technique in wallpaper design and for the bas-relief pattern which was between modern and classic and adaptable to many types of interior. Honorable mention was also given to Robert Kovacic of San Diego for his "Tribesman's Fence" design.

The only honorable mention given in lamps and lighting category went to Pipsan Saarinen Swanson for a candleholder of high esthetic quality and satisfactory functional design.

In furniture, Muller-Barringer scored a second as well as a first. Their contemporary version of an English Hunt table was a close contender to their winning coffee table. The Hunt table, made in five beautifully fitted pieces was noted to have greater flexibility than the 18th Century pieces and have

SCULPTURE TELLS STORY OF ELECTRICITY

The Pacific Gas and Electric Company's new $4,800,000 transformer and distribution center at Mission and Eighth streets in San Francisco is a stately symbol of the service of electricity to a great city. Because of its nearness to the city's famous Civic Center, special care was taken by the company to make this new Mission Station architecturally attractive.

"The panel shown at left portrays how the sources of energy above the earth's surface are converted by hydroelectric plants into controlled power. The sun (1) draws up moisture, which is precipitated as snow (2) and rain (3). From reservoirs (4) the stored flood waters pour through penstocks (5) to powerhouses. The tremendous force of the water—directed through turbines (6), Pelton water wheels (7) and generators (8)—produces power to operate the gears (9) and furnaces (10) of industry."

greater versatility as a result. Other honorable mentions in furniture design were to Edith and William Hernandez for a sturdy but slender-scaled birch desk-table in a right-angle shape; to Abel Sorensen for a nest of molded plywood tray-tables with enamel-finish steel legs, manufactured by Knoll Associates; and to William Armbruster for a glass-top metal-framed coffee table, light and airy in scale, manufactured by Edgewood Furniture Co. Florence Knoll of Knoll Associates received honorable mention for a stacking-stool of birch with enamel-finish rod legs. This stool was also noted as being functional as a small end table.

Members of the jury are: Karl Bock, Robert Allan Jacobs, Louis Kilmarx, J. Labatut, Lloyd Morgan, Charles Nagel, Jr., Charles S. Shaughnessy.

THE ART ALLIANCE PHILADELPHIA

Approximately fifty architectural firms from all sections of the United States were represented in a comprehensive survey of contemporary architecture and its allied arts in America at the Philadelphia Art Alliance which opened on March 4 and will close on April 2.

Among those from the West Coast who were represented with work at the exhibition were: Pietro Belluschi, Portland, Oregon; W. W. Wurster, Paul R. Williams and A. Quincy Jones, E. J. Kump, Henry Hill, Richard Neutra, and Bamberger & Reid of California; and Bernham Hoyt of Denver, Colorado.

The committee on arrangements includes Henry H. Allman, Philadelphia Art Alliance; Oscar Mertz, American Institute of Decorators; J. Roy Carroll, Jr., American Institute of Architects; Joseph T. Fraser, Jr., Sculpture and Painting; George S. Koyl, American Institute of Architects; Henry D. Mirick, American Institute of Architects; William C. Pfender, T-Square Club; Markley Stevenson, Landscape Architecture; William R. Talbot, American Institute of Architects (Crafts); James Talbutt, American Institute of Architects, and Henry Lee Willet, Philadelphia Art Alliance.

SAN FRANCISCO MUSEUM OF ART

The Sixty-eighth Annual Oil, Tempera and Sculpture Exhibition of the San Francisco Art Association opened an exhibition of 105 paintings and 45 sculptures selected from among some 940 works originally submitted to the three juries making the selections.

The Eighth Street wall features two large sculptural reliefs depicting the interrelated factors in the generation and uses of electricity. They were executed by Robert B. Howard from designs worked out by him with William Gladstone Merchant, architect. Both are members of the San Francisco Art Association. Using the numbers on the pictures starting on the opposite page, Mr. Howard explains the meaning of the relief.

"The panel shown at the bottom deals with the sources of energy originating within the earth. Fuels are piped (11) to the surface to create flaming heat (12) in steam plants and force great turbines (13) to turn generators (14), thus producing electricity for community and industrial heat (15) and light (16) through incandescent filaments (17) and electric arcs (18)."

San Francisco Art Association, Photo's

Awards for the 1949 exhibition included: Franz Sandow, Special prize for Torso (redwood); Ynez Johnston Keklak, Merry-Go-Round (Anne Bremer Memorial); Carl Morris, oil "Boy With Chalice" (San Francisco Art Association Emanuel Walter Purchase); Mine Okubo, oil "Cat and Cradle" (Anna Elizabeth Klumpke); Frann Spencer, oil "Bird and Dancer" (Artists' Council prize for painting); Ernest Mundt, copper and brass "Oppression"; Leonard Edmondson, oil "Integrated Forms" (Prize for Painting).

Adaline Kent, magnesite "Ambush" (Sculpture); Galya Pillin, oil "Dance Recital" (William L. Gerstle Prize); Joseph Fiore, oil "Semaphoric Metaphor"; Bob Winston, wood "Contralto"; and John Baxter, bronze "Medusa".

The three juries were PAINTING, Robert M. Church, Edward Corbett, John Humphrey, and Hal Goldman. PAINTING, Leah Rinne Hamilton, Margaret Peterson O'Hagan, and Ellwood Graham. SCULPTURE, Robert B. Howard, Richard O'Hanlon, and Ralph Stackpole.

COLUMBIA UNIVERSITY SPRING LECTURES

Dr. George H. Edgell, director of the Museum of Fine Arts in Boston, and Orin E. Skinner, president of Charles J. Connick Associates of Boston, will give the 14th series of Mathews Lectures this spring for the Columbia University School of Architecture.

Dr. Edgell will discuss "The Development of Medieval Architecture", while Skinner, one of the outstanding stained glass designers in the country, will cover "The Crafts in Medieval Architecture".

PORTLAND ART MUSEUM

Thomas C. Colt, Jr., director of the Portland Art Museum, West Park and Madison, Portland, has announced the following schedule of exhibitions at the Museum for the month of April:

In the Oregon Artists Gallery, "Abstractions in Oil" by Maude Kerns will close on April 15th, as will the "Art Work from Portland High Schools" currently being exhibited in the Young Peoples Gallery.

Opening on April 15th, and continuing until May 15th will be the Museum Art School Student Exhibition and the Oregon Guild of Painters and Sculptures exhibit.

The opening of the Museum's Collection of Indian Art of the Northwest Coast will take place the latter part of April.

At the Annual Meeting on February 14th, the following officers were elected for the ensuing year:

Dr. R. F. Arragon, President; L. Hawley Hoffman, Vice-President; Mrs. Lawrence Wheeler, Vice-President; S. Mason Ehrman, Treasurer, and Thomas C. Colt, Jr., Secretary. Elected to serve as members of the Board of Trustees were: Alfred Corbett, David L. Davies, Pietro Belluschi, Philip Joss, Dr. Wm. K. Livingston.

CITY OF PARIS

The Rotunda Gallery will present an Exhibition of Oils and Watercolors by Angna Enters, George Post, and Milford Zornes from March 30 to April 23rd.

The Art-In-Action Shop will feature a group of "Pictures of the Month" watercolors by Kenneth Potter; the Modern Homebuilder, Ascher drapery material designed by Henry Moore; and a demonstration on the Weav-Rite Loom, exclusive with the City of Paris.

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., director of the California Palace of the Legion of Honor, Lincoln Park, San Francisco, has announced the following schedule of exhibitions and special events for April:

EXHIBITIONS: Paintings by Nell Sinton; 19th Century American Paintings from the Museum Collections; 20th Century American Paintings from the Museum Collections; The Navajo, Photographs circulated by Life Magazine; Paintings by William Gaw, and Paintings by Bertha Baker.

ACTIVITIES: Art classes for children, age 8-15, each Saturday at 10 a.m., conducted by Lilly Weil Jaffe and Frank Lobdell (No classes April 16). Gallery tours of the 19th and 20th Century Paintings, Wednesday (Except April 13), conducted by Lilly Weil Jaffe at 2:30 p.m.

Organ recital by Uda Waldrop, Saturday and Sunday at 3 p.m. and Free Motion Pictures each Saturday at 2:30 p.m.

MILLS COLLEGE ART GALLERY

Exhibitions at the Mills College Art Gallery, Oakland, California, during April will include:

Peruvian Textiles, a collection of Lionel H. Pries, Seattle; Indian Baskets, Mills College Art Gallery and Misses Pardee collections; and Architecture of the Andes.

Restoration and Planning of British Towns

By RAGLAN SQUIRE, F.R.I.B.A.

As an architect I am naturally concerned in what is going on in the way of bringing our big cities in Britain back to a reasonable state of repair. I am also interested in the plans which are being made for future development on long term basis, and I am going to talk about both these aspects of reconstruction.

Most people must have felt at some time or another when walking round the central areas of the principal cities of Great Britain, how fascinating are the historical associations that arise as you look at the variety of facades which catch your eye at every turn. At the same time you may have been struck, if you have ever stopped to compare the winding ways you know, the awkward corners and the quaint old buildings, with photographs—or, if you have traveled, with actual experience—of the modern cities of the new world.

Consider New York for a moment with its formal rectangular road pattern and its skyscrapers. Have you ever wondered why it is so different from, let us say, London? The difference is due to the historical background within which these two cities have developed. The origins of London can be traced right back to pre-Roman times and, with the advent of the Roman conquerers, the pattern of London as we know it today was set. (For example, London's Edgware Road, Finsbury Pavement and the Old Kent Road were laid out by the Romans and the traffic still runs on the old Roman foundations). Ever since that time, nearly 2,000 years ago, London has been slowly evolving. The pattern of the "City"—"a city within a city"—was laid during the dark ages when London was subject to constant raids up the Thames from continental Saxons, Danes and other invaders. Westminster Abbey and Westminster itself date from the Norman Conquest. The Temple, Lincolns Inn Fields and Covent Garden grew during the peaceful period after the Wars of the Roses. Belgravia, Kensington, Bayswater and Bloomsbury to the West; Hackney, Shoreditch and West Ham to the East, were built during the 18th Century along the old winding country lanes. The 19th Century saw the expansion and development which heralded the intensification of urban life as we know it today. But all this was haphazard, unpremeditated and unplanned. At no time did anyone sit down and say "London will be this shape or that shape" and have his plans carried out. Some efforts **were** made it is true; for example Queen Elizabeth decreed that London should not be allowed to extend beyond its 16th Century boundaries; (Oliver Cromwell also tried). After the Great Fire, Christopher Wren produced a plan for the complete reconstruction of most of London as it then stood; but little of this was carried out (with the exception of the area around St. Paul's and the linking up of the Strand and Westminster via Trafalgar Square and Whitehall).

Despite efforts of this kind, London developed in its own queer way with a little nook here, and a wandering street there, over a period of twenty centuries.

But what of New York? Three hundred years ago New York didn't exist at all. It was merely a rocky island lying in the estuary of a big river—a few early colonists settled there and harbor facilities were established. As soon as it became apparent that expansion was likely, a plan was made. New York grew according to plan. Hence the rectangular blocks, the square road intersections and the bustling efficiency. The skyscrapers again, are due to historical fact. A small rocky island had been accepted as the site for this town. As the city expanded, everyone wished to live and work on the island itself and the demand for space became intense. With a firm rock foundation, the obvious solution was to build upwards.

London, and most British cities, are the products of slow, haphazard growth, whereas New York

(See page 26)

An Architect's DREAM...

The Equitable Building

PIETRO BELLUSCHI
ARCHITECT, A.I.A.

By ARTHUR W. PRIAULX

The ideal of every architect is someday to have a client who will give him a perpetual green light on his ideas and the children of his imagination, no matter how daring, for he knows the end result will be the dream building. Such was the rather unusual combination when Portland's famous $4,000,000 Equitable Building was conceived and built. In Pietro Belluschi the officers of Equitable Savings and Loan Association had an architect of sound reputation fired with uncommon urge to cast aside archaic building practices. His plans listened well, made even more sense as they took shape on the half block on Sixth Avenue between Washington and Stark Streets on financial row.

Belluschi had long felt that the exterior facing of buildings was perhaps a carry-over from times

ROSS B. HAMMOND, General Contractor

EQUITABLE BUILDING

PORTLAND, OREGON

SPACIOUS banking quar
ters looking toward th
street.

No street noise pene
trates the double plat
glass, and air condition
ing creates ideal climat

when architecture was primarrilly imitative of the past. To him it seemed both anachronistic and illogical to see many materials hung on the beautiful light patterned steel frame of the building.

Why not use metal siding? The skyscraper and office building is distinctly American, Belluschi reasoned, so why not something more in keeping with the theme of the steel and re-inforced concrete giants. Aluminum had come fast during the war and with the advent of cheap hydro-electricity in the northwest, was economically within reach for building use.

Today, the 12-story aluminum-crystal Equitable tower stands as a monument to the daring initiative of Pietro Belluschi and the unfailing confidence of the financial institution's officers in his amazing ideas.

LOOKING from center of banking quarters towards entrance and receptionist's desk of glass and chrome.

Entrance doors are heavy glass and doubled.

CHARMING, modern offices give tenants feeling of well being. Typical office space, this room has been finished from 18 by 20 ft. space.

Equitable Building is the first skyscraper to be built in the northwest in the past twenty years, and one of the very few built in the nation since the war. It is the first multi-storied building to be erected in six decades since the perfection of the style which emphatically departs from the conventional. It is a glittering, amazing pile of two-toned aluminum and glass with not a square inch of masonry showing above the first floor.

Its smooth, projectionless surface looks smart, engineered and modern. A greenish cast is given to the exterior by the sea-green panels of heat-absorbing glass which seem to form most of the outer walls, framed only by highly polished rolled aluminum sheathing and duller cast aluminum panels for the spandrels.

Belluschi has used the brilliant, shining sheathing and glass to attain a candid simplicity which sets the theme of the entire building. Here is functionlism without ostentation, dignity and richness without all the garish trimmings of the past.

Equitable looks for all the world like a building

IG unbroken office vista is this 180 ft. long ce of the Commonwealth, Inc., who occupy second floor.

ANOTHER Commonwealth view from outer side of row of walnut-covered columns. These are beautiful offices.

counterpart to the streamliner trains and planes of today. In many respects the comparison is pat, for Equitable is completely air-conditioned, has the same crisp, clean cut lines of the modern trains and airplanes.

The system for heating and air conditioning the Equitable Building is in many respects the most startling feature of the structure. Both heating and cooling are done by electricity through the reverse cycle system. There are no flues, chimneys or furnaces in the building. Heat or cold comes from well water from wells drilled 150, 175, 500 feet into the earth. During cold days, a heat pump "squeezes" the heat out of the water from the warm water well and pumps used water back into a discharge well. The heat, extracted by compression from well water, then is forced into the heating system of the building. During hot days the cold water well supplies the cooling system with the correct amount of cold to maintain the desired temperature in the building. Once robbed of its cold, the used water is pumped back into the common discharge well. Difference in depths of cold and warm water wells maintain temperature differentials. Because of Portland's mild winters the heat pump is attractive and low power rates make it practical. The basement is the heart of the reverse cycle system, a complex yet highly flexible arrangement of heat pumps with electricity the only fuel. The intent is to maintain year-around conditions in the building of 70 degrees temperature and 55 per cent humidity.

Full air conditioning is made possible economically by the use of double layer glass. he hermetically sealed air space between sheets of glass makes it possible to reduce heat loss in winter, but the size of the reverse cycle equipment was determined by the summer load or the amount of heat transmitted from the outside in the summer months. For that reason, the outside sheet is three-fourth inch heat-absorbing glass.

The glass is capable of absorbing as much as 40% of the heat normally transmitted through plate glass. This permitted J. Donald Kroeker, mechani-

BOARD of Directors' suite of Commonwealth as seen from the President's spacious, well-appointed office.

cal engineer on the building and perfector of the reverse cycle heating, to reduce the size of the plant in proportion. This reduction, as well as the reduced cost of running the reverse cycle plant, will make it possible to affect sufficient savings to almost make up the added cost of the heavy glass.

The building has no windows in the conventional sense, since the large expanse of glass is stationary. The peculiar type of outer wall or skin construction makes the building virtually sound proof from street noises. Lack of windows has baffled some tenants for whom temperature and humidity provided by the plant is not exactly what they wanted at the moment. But, to the great number of tenants and visitors to the building, controlled heat and humidity is taken for granted after a short time. The goal in the Equitable Building is to strike an ideal temperature at the ideal humidity percentage so that occupants are climatically unaware of their surroundings, which is the test of good air conditioning.

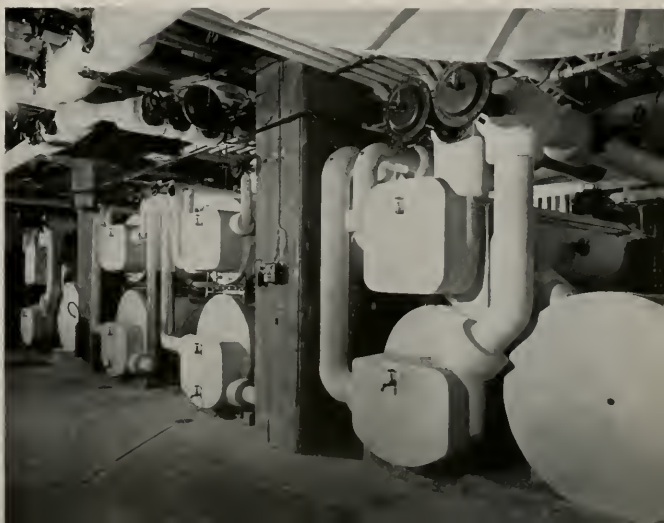
The building is a haven for hay fever sufferers for the air throughout the building is constantly changing, circulating through cleverly concealed ducts fitted under the windows, and all foreign substances, dust, lint and pollen are extracted from the air returning from the building in a special electronic device in the basement.

Another unusual feature of great interest is the artificial lighting adopted throughout the building. Low voltage cold cathode tubes without light fixtures are used everywhere. The eight-foot tubes have very low surface intensity and span their sockets under the bare ceiling, which acts as a reflector. A continuous parallel system of ceiling gutters set at eight-foot intervals permits a completely flexable installation of lights at any point, either parallel or at right angles to the outside windows. This artificial light, approaching daylight in quality, makes the inside room space as desirable as that near the windows, since ventilation as well as light is excellent. The above mentioned wiring gutters, installed at eight-foot intervals and readily accessible through metal plates, also serve to tap new floor outlets at any desired point of the floor directly above. This is done by drilling through the concrete slabs and fishing to the nearest gutter, which has knockout holes on the sides for easy connections. This system allows more complete flexibility than other more conventional and more expensive systems of under-floor conduits.

Accoustical ceilings have been used in all offices and walls have a newly developed plastic skin. Flush doors, made of Oregon birch, have no conventional knobs, but automatic closers and aluminum push plates. All floors have a rubber tile covering.

The building is simple in construction, but remarkably strong. It is of reinforced concrete skeleton, the lower stories of which are supported on high strength concrete columns of 5000 pounds per square inch compression value. Exploded volcanic glass from eastern Oregon, was used in place of sand in the plaster and reduced the weight of walls

(See page 29)



HEATING SYSTEM

Showing four turbo-vacuum compressors, a total of 540 tons of refrigeration capocity provide heat and cooling for building. These are the heat pumps, electrically powered.

EXTERIOR has exposed concrete block wall painted with oil paint

THE SQUARE CLASSROOM EDMONDS GRADE SCHOOL

Edmonds, Washington

WILLIAM ARILD JOHNSON, A.I.A., & HAROLD W. HALL
Architects & Engineers

The time may not be too distant when school boards and public officials charged with the responsibility of providing adequate school room facilities for our ever expanding educational requirements, will be faced with the problem of limited construction budgets.

With this thought in mind William Arild Johnson, A. I. A., Architect of the firm of William Arild Johnson & Harold W. Hall, Architects and Engineers, Everett, Washington, has already inaugurated a school construction program which is satisfactorily exploring the reduction in school building costs.

An outstanding example of what can be accomplished along this line is the Edmonds Elementary School at Edmonds, Washington, which embodies the advantages of the square classroom.

In commenting on the Edmonds School, Architect Johnson, says:

"The subject of future construction costs is so intimately tied in with our economy that no predictions should be made which do not take into consideration the vast and complex price structure which accounts for present construction costs. Because the question is so important, however, we have spent some time reviewing what we believe to be the immediate controlling factors, which can be set aside in four basic elements of construction cost—1) labor, 2) materials, 3) design plus supervision, and 4) finance. Of these four, two may be eliminated at the outset. Money is the only thing that is cheaper than it was twenty-five years ago. Any real savings will have to come through design of construction.

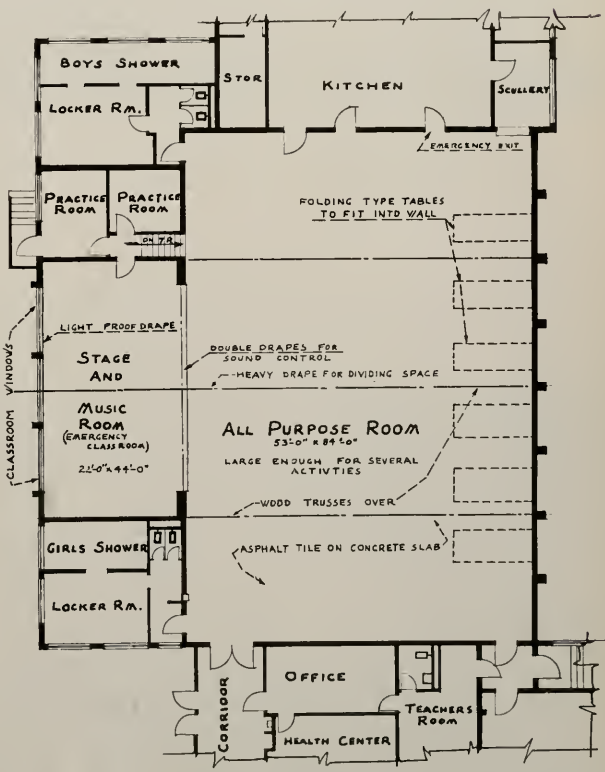
"We might try to reduce labor costs, to reduce material costs, and to lower the quality of the building. The latter item is unsound because it causes excessive maintenance and repair bills which nullify any original saving. There is little indication of reduced costs of labor or material in the immediate future.

"We must therefore accomplish the lowering of building costs largely by not using so much labor and material, while at the same time retaining the quality of construction.

"An essential concomitant to school house construction economy is attitude—the research attitude. New and better methods will be found if one puts all available experience and talent to 1) Designing as economically as possible, consistent with the function of the building; 2) Cost designing every possible structural combination for which materials are available; and 3) Testing all combinations of exterior and interior finishing materials to determine the simplest and most economical combination that will serve the purpose, stand punishment, and retain a pleasing appearance. Naturally such research costs the architect extra money.

"There has been a considerable increase during the past few years in the use of the 'square' type of classroom, which has been used sporadically for many years but was never generally accepted because of the unsuccessful daylighting of the corridor side of the room and because of the higher cost of constructing the long span. Comparatively recent developments in bilateral and clerestory lighting and new construction methods have made the square classroom feasible and economical.

"Square classrooms are now being advocated by leading educators, and have proven very popular and successful in many parts of California. Because of their depth they require more than the conventional unilateral windows, but bilateral



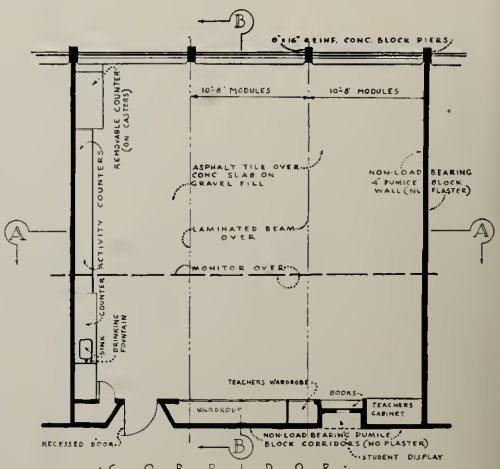
FLOOR PLAN

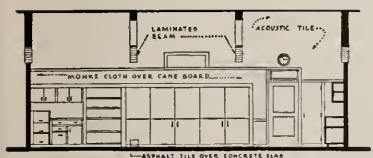
All purpose Room and adjoining service rooms, Elementary School, Edmonds, Washington.

SQUARE Classrooms, because of their depth, require more than the conventional unilateral windows, but bilateral and clestory windows more than fill this need.

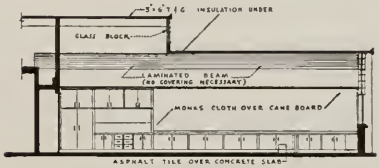
TYPICAL CLASSROOM

Economically designed in consistence with the function of the building.





· SECTION · A-A ·



· SECTION · B-B ·

THE rear elevations of a typical classroom showing the clean cut arrangement of the storage cabinets, work tables, and sink.

"The shorter length of the room provides a more economical plan for the entire building, as the rooms do not project so far into valuable playground space on the site. Water, sewer, and electric lines and corridors are reduced in length. Space is more cheaply enclosed in the square type classroom because it requires fewer lineal feet of wall space. The whole school plant is more compact; more efficient use of building space on the site increases playground area. We have been able to deliver schools at a lower cost per square foot by using the square classrooms."

Architect Johnson has given full consideration to the utility phases of the square-classroom and points out that because of its efficient construction the activity of work spaces are scattered and not concentrated in one end of the room. The teacher therefore, is closer at all times to the various student work which makes for much better supervision.

THE Square Classroom provides at least three major instructional spaces. Work areas, thus scattered, permit the teacher to be closer at all times to activities, ensuring better supervision.

THE Floor of the Kindergarten is asphalt tile over concrete slab. Side wall is pumice block construction covered with acoustic material.

and clerestory windows more than fill this need. In fact, it is now possible to obtain almost ideal daylighting conditions, such as uniform daylighting across the square classroom. No longer is the pupil at the inside wall near the corridor compelled to work in approximately one-tenth as much light as has the pupil near the window.

"Heating presents no difficult problems. Nor does the wide classroom present a structural problem. Light steel beams or glued-up laminated beams economically span the 30-feet. Our square classrooms have been more economical to build than the conventional wood joist construction across a 24-foot span. We have employed an engineered, factory type and mill type of construction for the roof of our one story buildings; this has made it possible to provide more and better distributed daylight at reduced costs.

"This type of classroom is better suited to one story than to multiple story buildings. The latter would present a structural problem because of the 30-foot span.

THE Kindergarten has laminated glued up wood girders to support the roof. These are not cased, only painted.

A typical classroom showing the simplicity of the roof construction using laminated glued up girders and exposed concrete block walls.

The square shape allows for more flexibility in seating arrangements and provides at least three major instruction spaces. Because of better daylight distribution, children can be seated in almost any arrangement and still have visual comfort.

The square classroom, especially for elementary schools, have enough advantage to commend them seriously to the attention of every educator.

THE Square shape of the Classroom allows for more flexibility in seating arrangements and provides at least three major instructional spaces. Children can be seated in almost any arrangement and still have visual comfort.

MOROCCO'S ARCHITECTURE

As Seen By

BORIS NEPO, Architect, D.E.S.A.

"Charette" in Morocco! The office was in a blue haze of cigarette smoke as the job was completed after an all night session.

Boris Nepo, French architect had just completed his first big job—a three hundred unit apartment house.

Assisting him were two of his classmates, one Haitian and a Parisian from the Ecole Specille de Architecture where the three had received their diplomas in 1930.

As they opened the windows and rolling wood blinds to let in the morning sun the combined sounds of automobile horns, the cries of the street vendors, the braying of the donkey, and the rustling of Palm leaves announced the new day.

The office was in the European quarters of the coastal city of Rabat, which is the Capital City of Morocco, where Maltese, Italians, Spanish and Germans have mixed with the French colonists. Europeans however, are predominantly French and the majority of Morocco architects have come from France, although the Foreign Legion still has trouble from time to time in a few spots in the interior, high in the Atlas Mountains.

The cities such as Fez, Rabat, Casa Blanca, and Marakecae have been under a successful French protectorate for many years. There is good cooperation and understanding between a Moroccan and French governments.

Two reasons for the success: (1) The complete

APARTMENT HOUSE

Exterior windows are protected from view from the street by wooden blinds which are rarely opened.

Rooms open into inner courtyard where open Arcaded passages give privacy to each floor.

Tile over window is typical of Morocco, and is rich deep green.

BORIS NEPO, Architect

separation of native and European quarters in most cities, thus minimizing the difference in the two ways of living and (2) the ability of the French to understand the native point of view.

Stressing this latter point, government and private buildings have been strongly influenced by native architecture.

Schools for natives keep native customs and teach Arabic, crafts and economics, geared to native needs as well as the regular courses in arithmetic, French, history and other general studies.

French missionaries dress and live like Moroccans. Moroccan officials are entertained as they would be among their own people, not as they would be in France.

This spirit of the country is reflected in the work of Boris Nepo. In this work the relation of openings to solid masses, the diversity of form, and the use of flat roofs, all show the influence of native architecture.

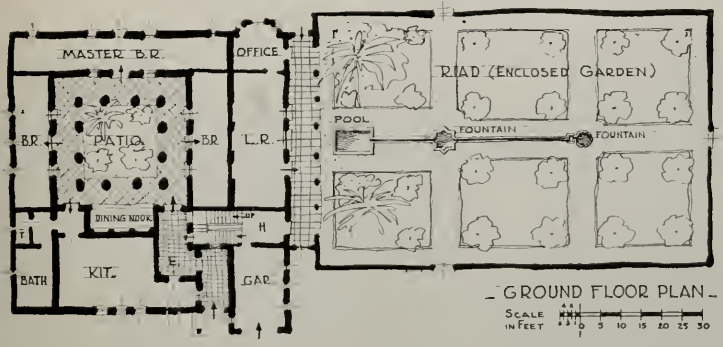
During his seventeen years of practice in Rabat, he has designed over three hundred buildings well suited to the climatic conditions which combine the use of new materials with the traditional masonry construction.

In Morocco there is an abundant supply of calcairous stone that is easy to cut and hardens when exposed to the air. This is extensively used for walls.

Low cost labor—75 cents per day—makes masonry construction feasible. Even for garden walls,

PROPERTY OF SI L'CAID BOUZA AT KORIFLA, MOROCCO — BORIS NEPO, ARCHITECT, R.E.S.A.

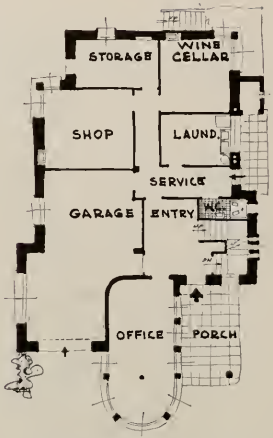
FRONT ELEVATION



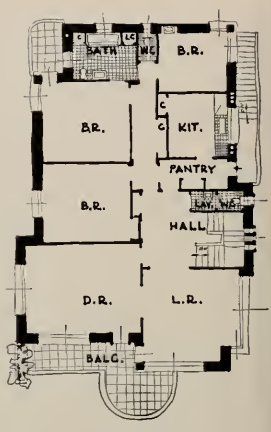
GROUND FLOOR PLAN

BUSINESS Office and Services on ground floor.

All living quarters on second floor. The kitchen is set apart from dining room at owners request.



GROUND FLOOR PLAN.



SECOND FLOOR PLAN.

ABEROLA RESIDENCE ON BOULEVARD PASTEUR, RABAT, MOROCCO.

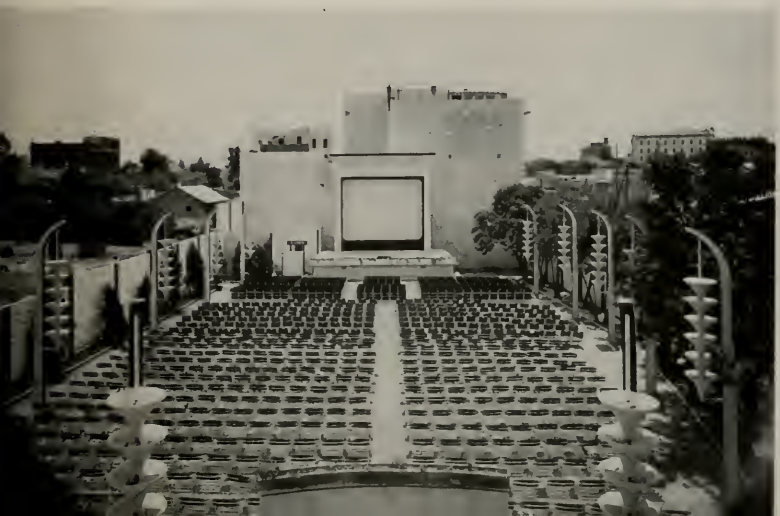
RESIDENCE of Mr. Alberola built in Rabat in 1938 at a cost of $18,000. The wall and hedge give the same privacy to the property as that found in the native "Riads", or enclosed gardens. Masonry and concrete construction, with stucco exterior. Interior partitions of plastered hollow tile, and cement tile floor.

BORIS NEPO, Architect

ENTRANCE

Garden Cinema at Fez, where climate is dry and lends itself to the open air theater.

SIDE walls consist of concrete posts with hollow tile filler panels finished with a cement wash. Advantage was taken of an existing row of trees, new planting being installed on the opposite wall. Folding chairs are used throughout. Minimum investment for maximum use of ground.



interior partitions which are hollow tile units in European buildings. Native buildings still use stone bearing walls throughout.

Reinforced concrete is used for interior columns, floors, roofs, sun visors, foundations and piles. Large terra cotta units are used in floors and roofs instead of flat forms or metal pans, this acts as insulation against heat and sound, they have a special shape that requires a minimum of form work and give a surface that can be plastered directly.

Roofs are generally flat, using from two to ten inches of tamped earth fill for insulation, and they are finished in terra cotta tile or built of roofing. Tile is preferred, because most roofs are used for sun decks in the winter and as a drying yard for clothes the year 'round.

Floors are finished with compressed cement tile except in bathrooms where unglazed ceramic tile is used, base boards and wainscots are of glazed ceramic tile, walls and ceilings are plaster.

No wood is used structurally, nor is it even permitted to be used in cities. Formerly ceilings and roofs were made of mud over wood beams in the natives' buildings. Wood windows are the only part of the construction that is combustible, hence, during his entire stay in Rabat, Nepo has never seen a building on fire. A friend of his had been a fireman for years without ever having gone to a fire. In view of the large number of fires in the United States, Nepo's conclusion is that frame construction is too dangerous in cities to be permitted.

Plans shown in this article are typical Moroccan buildings for Europeans. They have business offices, garages, and storage on the ground floor, with living quarters above. Dining rooms are given as much space as living rooms because meals are considered more important there than they are here. Family meals last one hour and dining with guests can easily last three hours. Direct access from the kitchen is usually avoided in order to minimize transmission of cooking odors and noises. Europeans living in North Africa are much the same as their ancestors, they consider time less important than we do and a few extra stops mean nothing to them.

In the Arbola residence, cooking and serving is done by native servants that come in during the day so the kitchen is completely isolated by a pantry and hall. The exterior stairs to the kitchen is used for servants only, as is the custom, this room is on the street side so that street windows where fish, dairy products, and vegetables may be seen and bargained without the cook having to leave the kitchen.

(See page 40)

AUTOMOBILE painting and accessories shop in Rabat, built of concrete and masonry at a cost of $7200 in 1936 **BORIS NEPO, Architect.**

TOP: Villa de Mme Dupuis in Rabat. Cost 200,000 Fr.

LEFT: Pons Residence. Cost $4200

BELOW: Calle residence was built in 1937 Cost $4000

BORIS NEPO, Architect

RESTORATION and PLANNING of BRITISH TOWNS

(From page 7)

and the cities of the United States are products of rapid development on tightly-planned lines.

What bearing have these historical backgrounds had upon the respective situations of our cities as compared with those of the new world? Our cities, as we have seen, grew slowly. They have grown from the center outwards. At each period, new building was always taking place on the periphery, and this tendency has inevitably resulted in the centers of big towns becoming gradually more and more out of date. They are relics of bygone history founded on a street pattern ill suited to requirements of this present age. The winding streets of the City of London may have been appropriate to the traffic of early times, but they are hopelessly inadequate to cope with large 8-wheeled trucks and double decker buses and a perpetual stream of automobiles and taxis.

Covent Garden, Smithfields and Billingsgate were ideal markets to serve a town of a few hundred thousand people but not a population of 8 million. The little three-story buildings of Oxford Street, Bond Street and Camden Town were never built to cope with the shopping requirements of the vast populations they now have to support. I could give many other examples, but these will suffice to demonstrate my point; the central areas or, might I say, the hub of London—London being only typical—are hopelessly inadequate to serve their purpose. The core is rotten. Like the apple, all bright, shining and fresh on the outside but decayed in the center.

This fact has long been recognized and legislation was being considered when war broke out in 1939. The outbreak of war led to postponement. But when the bombs began to fall and areas were cleared, a sudden surge of public interest in reconstruction led to the formation of the new Ministry of Town & Country Planning in 1943 and to great activity in the preparation of plans. Sir Patrick Abercrombie was appointed to prepare a plan for the London County Council and later, a plan for the whole of the Greater London area. Sir Patrick and his team were fully aware of the state of affairs which we have already noticed and plans were evolved for the complete reconstruction of large areas in central London. These plans today form the basis upon which all redevelopment will be considered for the next 50 or 100 years. At the time of their preparation, (when the blitz was at its height), it was hoped that large-scale rebuilding would take place as soon as war had ended. Alas, today we know otherwise. It was soon evident that Britain's resources had been so completely and ruthlessly expended in war that it would be impossible for any large redevelopment to take place for some considerable time.

The beautiful Nash terraces of Regent's Park, the Regency buildings of Belgravia, Bayswater, and Kensington, the Quadrant at Bath, and many similar areas in Cheltenham, Brighton and the like (where requisitioning had taken place on a large scale during the War), were on de-requisitioning, found to be completely uninhabitable. No family could afford to run a house that needed a staff of anything from six to a dozen domestic servants to keep it going.

Had it been possible to rebuild on the scale originally anticipated, these areas would doubtless have been put at the mercy of demolition squads and new buildings would have been designed to take their place; but impoverished as we were by the war, we are faced instead with the problem of "make-do-and-mend."

All these fine old terraces can be, and are being, converted into apartments for ordinary people; into Government offices and into accommodation for many other users, and, (if we wish to count our blessings), at least this means that the elegance of a by-gone age can remain with us for another twenty years or so.

The problems presented by these conversions are considerable. The architects have to plan small compact modern apartments in rooms never designed for such a purpose. Building materials are scarce. Plumbing has to be run where little plumbing existed before; elevators, quite rightly, must be left unimpaired by unsightly new windows and pipes; dry rot has been rampant through the neglect of the war years, and many of the buildings themselves have already passed their allotted span of life.

These difficulties however, are being encountered, grappled with and solved. We are making the best we can out of our "make-do-and-mend." The Government's Crisis White Paper of September 1947 planned for a contraction of the building industry by nearly 250,000 men. Owing to the acute economic situation of the country these men were required to be transferred to work in the big export industries. But the work of conversion still continues. Wherever you go, you will see here and there, scaffolding outside some old building

which is being brought back into useful life. Many of the old terraces have fresh bright coats of paint. They house families who would otherwise have been homeless. In the badly-blitzed areas of London's East End—at West Ham, Leyton, and around the Docks, an enormous amount of war damage repair has been achieved. This war damage work is sometimes done by the Local Council and sometimes by private enterprise with funds provided by the War Damage Commission. All this work must go on if we are to make every available use of the poor resources we have. But this "make-do-and-mend" policy is only temporary and the survey work for the more detailed long-term plans is proceeding.

The whole machinery for planning has been overhauled on a nation-wide scale. Planning which was until a short time ago, a voluntary matter for each local authority is now obligatory throughout the country. Planning powers are now to be vested in the County and County Borough Councils, thus achieving a wider outlook and a greater scope for the operation of large scale replanning. The new Ministry has already produced a series of first-class pamphlets for the guidance of local Government authorities.

Great areas of London are being completely replanned. The South bank area of the Thames, for example, is to be a new business and commercial center linking up the West End and the City. The London County Council has plans afoot for large flat and housing redevelopment in Stepney, Shoreditch and many other of the less well-to-do boroughs.

Now let me try and paint for you a picture in words of what our cities in Britain may look like 100 years from now. I will take a small community, or what is known in current planning language as "a neighborhood unit." Let us assume that this district is a part of London and that it is somewhere not more than ten miles from Charing Cross. Such a district, at the moment, is likely to have one of the main arteries running through its heart. This artery will now be its shopping center with its multiple stores and the like lining a street through which trams, buses and heavy trucks trundle. Behind the facades of this main thoroughfare is, at present, a network of little streets and terraces of two or three story houses, many of them bomb-damaged, and most of them over-crowded, and all of them structurally at the end of their tether.

What is proposed for such an area within the framework of the London County Council plan? The old thoroughfare will be straightened, widened, and cleared of all its shops and trams. In its place a new dual carriageway will run, catering for fast through traffic. Located somewhere in the center of such an area will be the main shopping precinct placed to one side or the other of the arterial way. The shops, instead of being strung out in a long tedious row, will be grouped around a shopping square. In the center of this square there may be a fountain or a statue, or some other ornamental feature. Here will be placed the town hall, the public library, the cinema and the theatre, and sites will be allotted for churches of different denominations. This square will form the nucleus of the whole neighborhood unit.

The neighborhood will then be divided into a series of sub-units, each with its own smaller and more compact little local shopping centers where the odd tobacco shop, chemist, grocery store, and the like will be located. Each sub-unit will have its own primary school. The secondary school, built on modern lines with big glass windows, playing fields and recreational space, will be placed so as to serve two or three of these sub-units. The housing itself will be mainly composed of two-story terrace houses and three to five story block of apartments. The houses will be for the larger families and the apartments for the newly-married couples and small families. Homes for older people will be placed in the quieter corners, arranged around their own little private gardens.

Somewhere within the district, there will be a community center placed in its own grounds with indoor and outdoor facilities to cater for the leisure hours of all ages.

Many people will wonder whether these new towns will look as beautiful as the Georgian and Regency towns which we have inherited from a more gracious age.

As a modern architect I believe that they can be in every way as beautiful. It will be no good if we merely try to imitate the buildings of the past. The 20th Century is saddled with the machine and mass-production. The old crafts are dead.

These new buildings must be designed in a contemporary idiom, and there will be plenty of room for open spaces around the houses and apartments, so that the predominant pattern will appear to be that of a collection of harmonious buildings with varying skylines on a background of green grass.

This brief description may help you to visualize the sort of thing at which British planners are aiming, but you can well imagine that the difficulties of coordinating (in the case of London for instance) the work of 28 boroughs, each with its own pet ideas and aversions, is no mean undertaking. The work is proceeding, but it is bound to take a long time before finality is reached and so perhaps it is as well that there is this interim period which I have referred to as "make-do-and-mend." It should allow the master planners time to give proper at-

(See page 35)

ALTERATIONS — Clay's Store

Milwaukie, Oregon

Milwaukie Studio, Photos

THIS rather unique work of store front remodel, sidewalk repair, and display arrangement was done by

ASSOCIATED ARCHITECTS
of
Portland, Oregon

Victor Cochran, A.I.A.
Morgan H. Hartford, A.I.A.
Otto J. Kuettner, A.I.A.

TYPICAL office space with light partition used to give some privacy in one office. Ceiling and tile floor is uniform throughout the building.

and ceilings by one seventh, and has excellent acoustical qualities.

Window space in this crystal tower covers 39,500 square feet of the building's exterior. The glass supplies much light as well as insulation against heat and cold and harmful sun rays. The largest panes, 95 by 89 inches, were especially manufactured for Equitable. The outside of each window is supported by a stainless steel frame which has moisture resistant material in it.

Half the ground floor space is occupied by Equitable banking rooms which also require half the basement, in which the most modern burglar-proof safe deposit vaults have been installed, and half the building's mezzanine area. Other ground floor space is occupied by Great Northern Railway, Northern Pacific Railway, Van Duyn Chocolates, Service Drug, Arthur Leonard Pipe Shop, Roblee Shoe Store, Hurley's Jewelry and Ireland's Restaurant. The first two floors occupy a total floor area of 200 by 100 feet. The ten remaining floors are 200 feet long by 62 feet wide. There is 150,000 square feet of rental space of which Equitable occupies about 19,000. Atop the structure is a substantial super structure which houses a two-story auditorium and other offices for Equitable as well as air conditioning equipment.

Three floors of this very interesting building are occupied by single companies. Commonwealth, Inc., who act as building managers, occupy the full second floor in what are probably the most striking offices in the west. The Commonwealth main offices extend for 180 feet without a single break, flanked by walnut-veneer columns.

Third floor is given over to the Phil Grossmeyer Insurance Company and the seventh floor contains the activities of the Dant & Russell firm which handles shipping and lumber.

Remaining floors in the building are devoted to general office rentals and all space is occupied. Modular subdivision of offices on eight foot centers is a popular feature of all office space. This is made possible by a central mullion in each glass panel. This mullion holds a special spline the width of the sill which in turn will receive a lightweight metal and plaster partition. Several ducts in the ceiling of each office space permit easy access to all utilities at any desired point. Electricity, communications or air conditioning can be reached through these ducts and all of these utilities are contained in a sub-ceiling space suspended from the cast cement floor slab above. Offices are well lighted but there is no glare, even on the west exposures where late afternoon sun is strong in summer. Many offices have aluminum venetian blinds for dual purpose of privacy and elimination of outside light. The sea-green color of the glass when viewed from the outside is lost almost completely when you are in an office looking out and the glass appears as any other glass.

Equitable's offices, from the full-floor size to the smallest 18 by 20 foot square space, all have a distinguished appearance, a lightness, a cheeriness with crisp modern touch that is refreshing and new. The strikingly simple, yet effective exterior, which holds so much promise and allure, does not let one down. The interiors live up to all the promise of the exciting and brilliant skin. By using aluminum sheathing Belluschi has achieved a new look in the curtain wall which covers the conven-

tional reinforced concrete skeleton. He found other advantages in aluminum facing; lighter weight, lower installation cost, cheaper maintenance and upkeep. Windows will be washed from a bosun's chair suspended from a crane which travels around the building's roof parapet.

Ross B. Hammond, was general contractor for the northwest's most unique skyscraper. Like Architect Belluschi, Hammond ran across many problems in the actual task of erecting this daring new structure.

It was planned at first to fabricate all aluminum and glass for each bay in the shop, but Portland building code officials frowned on this plan, so the shiny skin of metal and glass had to be assembled in place. Extruded aluminum channels were first bolted to the concrete frame, then rolled aluminum sheets covered the frame, cast aluminum panels were fitted for the spandrels and then the glass was installed. Because of the light weight of material used only a small hanging platform, like a painter's scaffold was used and material was brought up inside the building on the building elevators. There are five high-speed, self-leveling elevators with signal control full automatic doors and the cars are equipped with rubber tired roller guides to insure smooth operation.

Both Equitable officials and Bellschi were subjected to some criticism when the announcement of the astounding departure in design for the new building was first made. Like most pioneers, they had their critics. Now, according to Ralph Cake, president of Equitable Savings & Loan Association, the finished building has won the approval of all who have seen and visited it and acceptance by the tenants has vindicated the fondest desires of the owners.

Recognized Everywhere!
• Best Materials
• Finest Workmanship
• Trouble-free Valves and Fittings
• Complete Sanitation
Specify HAWS—and be sure!
IT'S HAWS FOR HIGHEST QUALITY
Write today for '49 HAWS Catalog.
HAWS SANITARY DRINKING FOUNTAINS ELECTRIC WATER COOLERS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

HOBBS APPOINTED COMMITTEE CHAIRMAN

L. A. Hobbs, vice-president and sales manager of Smoot-Holman Company, Inglewood, California, has been appointed vice-chairman of the task committee of the National Security Resource Board to cover the western area for the electrical lighting fixtures industry.

Plans are being formulated for preparation, in the event of a national emergency, which would assure that demands for lighting equipment would be met.

GEO. E. SOLNAR APPOINTED ASSOCIATION MANAGER

George E. Solnar, manager of the Clay Brick Manufacturers Association of Northern California, has become manager of the Mason & Builders Association of California serving both associations from new enlarged headquarters at 55 New Montgomery Street.

Geo. E. Solnar

The two associations will continue to operate individually but will cooperate in all matters effecting their mutual interests. The new arrangement, Solnar pointed out, is intended to enable both associations to better serve their members through broader research in the fields of masonry workmanship, methods of construction and other activities.

A graduate of the Stanford School of Engineering, Solnar is also serving as secretary of the Structural Engineers Association of Northern California. He has been active in the Pacific Coast Building Officials Conference and the Masonry Apprenticeship Committee in conjunction with the San Francisco School Department.

ARCHBISHOP HANNA CENTER FOR BOYS: A bid of $1,907,231 has been received from Williams and Burrows, Burlingame, for the construction of 17 buildings at Boyes Springs, Calif.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Van Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Walda B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

NATIONAL HOME AND BUILDING EXPOSITION

Earl T. Heitschmidt, Architect and President of the 1949 National Home and Building Exposition scheduled for the Pan-Pacific Auditorium in Los Angeles June 2-12, has announced additional exhibit space has been made available for this year's show.

The exhibit is sponsored as a non-profit event by a group of major construction trade associations and the Los Angeles Chamber of Commerce.

COLUMBIA UNIVERSITY

Henry S. Churchill, town planner and architect, has been named an Associate in Planning at Columbia University, according to a recent announcement by Dean Leopold Arnaud of the School of Architecture.

Churchill, vice chairman of the Committee on Urban Planning of the American Institute of Architects and former consultant to the Federal Public Housing Authority, will act as a critic during the spring session.

SEMINARY BUILDING. The Salesian Society, Inc. of San Francisco, have awarded a $400,000 contract to Louis Murer of San Francisco for the construction of a Seminary Building in Richmond, California. J. A. Porporato, San Francisco, is the architect. Geo. Washington & F. H. Spitzer are the structural engineers.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Anderson, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas; Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Steve Barnes, President; Harry W. Bolin, Vice President; Lewis K. Osborn, Sec-Treas. DIRECTORS. Richard W. Ware, Geo. E. Brandow, L. T. Evans, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

SURVEY SHOWS INCREASE IN ENGINEERS SALARIES

Starting salaries for graduates of the New York University College of Engineering increased in 1948 by 11 per cent over the previous year according to the results of a recently concluded survey, reports John A. Hill, director of student personnel and admissions at the College.

The results of the survey were compiled through questionaires sent last fall to 365 graduates of the College of Engineering, Class of June, 1948. The graduates were asked the nature of the position they held, how it was obtained, and the starting salary.

The average starting salary, it was revealed, was $252 a month, an increase of $25 over the 1947 average. The largest starting salary increase—16 per cent—appeared to be in the aeronautical and administrative engineering fields, the survey reported.

A summary of the change in monthly starting salaries in six chief engineering fields follows:

	1947	1948	Pct. Inc.
Chemical engineering	$235	$264	12
Mechanical engineering	228	256	12
Civil engineering	235	255	8.5
Electrical engineering	238	251	5.5
Aeronautical engineering	211	245	16
Administrative engineering	198	230	16
Average	227	252	11

Of the 177 graduates who returned their questionnaires, 72 per cent took jobs in private industry, 16 per cent went into civil service posts, 9 per cent enrolled for graduate courses and 3 per cent were classified as miscellaneous. This distribution is about the same as in 1947.

In answer to the question, "How Did You Find Your Job," 24 per cent of the responding students listed the New York University Placement Bureau; 11 per cent, the College of Engineering faculty; 26 per cent, personal inquiry; 15 per cent, family and friends; and 24 per cent, newspaper, agency or engineering societies.

The survey revealed that 60 per cent of the former students who responded found jobs outside of New York. In 1947, 61 per cent obtained positions in the metropolitan New York area. About 70 per cent of the replies were from graduates who had secured jobs with the so-called "big" companies. Definitions for "big" and "small" firms were based on acknowledged prominence and physical size.

Out of the total of 177 replies, only three former students or 1.7 per cent were recorded as unemployed.

PREVENT FIRES and EXPLOSIONS
Caused by EARTHQUAKES!

Plus a Manual Control For Other Emergencies!

SAFETY ENGINEERS and scientists say the Sentinel is the most accurate and dependable earthquake actuated shut-off valve in the world!* On the job 24 hours a day! A record of more than 10 years of reliable service . . . ***proven*** during a period which included two major seismic disturbances. * Names on request

Indispensable in live seismic regions.
•
Recommended for use with Liquified Petroleum Gases.
•
Thousands installed in the United States.
•
List of installations available on request.
•
Available at leading wholesale plumbing establishments.
•
Indorsed by National Bd. of Fire Underwriters.
•
Leading Fire Prevention Engineers Approve.

Take No Chances . . . Install The
SENTINEL
AUTOMATIC GAS SHUT-OFF VALVE

Designed to shut off automatically when there's an earth shock or explosion sufficient to damage buildings or pipe lines. Listed by the Underwriters' Laboratories and specified by leading architects and engineers for installation in schools, fire stations, factories, theaters, churches, stores, municipal, military and utility buildings. A. I. A. File No. 29-F-6
Write for illustrated folder.

SECURITY VALVE CO.
410 San Fernando Rd., Los Angeles 31, California
Phone CApitol 6191

Lighting and Architectural Design*

I appreciate and am honored by your invitation to talk to you about "Lighting and Architectural Design." Inasmuch as I am speaking here before a large number of experts on lighting, I am going to talk about architectural design.

The architect is a creator of forms in space. Looking up the term "creation," I found interesting statements about the design procedure of the first and biggest creation of all times. "Now The Earth Was Unformed And Void, And Darkness Was Upon The Face Of The Deep; And God Said, 'Let There Be Light.' And There Was Light. And God Saw The Light, That It Was Good."

UTLER'S MEN'S SHOP; to create a sense of spaciousness in a tall area and to arrest traffic in a highly competitive neighborhood, lighting was employed as an integral feature of the chitectural treatment.

Light is still the basic element of every creation. Shape and color, which are the main pillars of architectural design, become apparent only through light. Architecture without light is unthinkable.

For thousands of years, it was only the light of the sun with which the architect had to work. The play of light and shadows on Egyptian Pyramids, Greek Temples, Gothic churches, is evidence of the mastery with which light was made part of architectural design. Daylight, too, was used in shaping the interiors of buildings. Light penetrating through colonnades, arches, stone tracery, colorful stained windows, lanterns in cupolas, created in the interior the emotional effect desired by the architect.

Artificial light has only recently started to play a role in architectural design. For a long time, it was used as a poor substitute for the light of the sun. But with the arrival of the candle, effective use of artificial light within architecture was made. Think of the crystal chandeliers sparkling with the reflections of hundreds of candles—which effect had such a impact on design that their form is still imitated by electric light bulbs in flame form placed on cardboard candles which even include artificial wax drops.

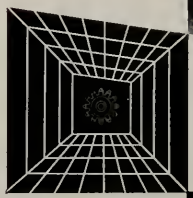
When gas light and electric light arrived, we were so happy to have these new inventions that we glorified the lighting source by designing pompous lanterns, candelabra, chandeliers and other lighting fixtures which imitated past lighting devices in a fashion similar to the first automobile imitatng the horse-buggy.

(See page 35)

* *Adapted from an address by Mr. Victor Gruen of Gruen and Krummeck, Los Angeles, before the South Pacific Coast Regional Conference of the Illuminating Engineering Society in San Francisco, March 3, 1949.*

Important reasons for specifying miller fluorescent troffer lighting systems

MILLER Troffer installations result in a finished lighting and ceiling job, adequate in illumination, architecturally pleasing, structurally sound and economically produced. The patented Miller Ceiling Furring Hanger simplifies installation — makes it possible to form ceiling patterns as desired — CEILINGS UNLIMITED*. Channels Bonderized for rust resistance.



MILLER LIGHTING SERVICE IS ALL-INCLUSIVE covering needs of planned commercial and industrial lighting. Miller field engineers and distributors, conveniently located, are at your call.

*Reg. Trademark U. S. Pat. Off.

THE miller COMPANY
SINCE 1896
ILLUMINATING DIVISION, MERIDEN, CONNECTICUT

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon
Libbey-Owens-Ford Glass Co.
116 New Montgomery Street

Vice-Pres., George E. Conley
Johns-Manville Sales Corp.
116 New Montgomery Street

Secretary, H. C. Galitz
Westinghouse Electric Corp.
410 Bush Street

Treasurer, A. J. MacJennett
Mueller Brass Company
475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

The March meeting of the San Francisco Chapter was held in the California Room of the Palace Hotel. Nick Nicholas, district manager of Bastian-Morley Company, presented a very enlightening talk on water heaters and had several Crane Company water heaters on display to bring out the various features of modern water heating. One of the largest groups ever to attend the Producer's Council luncheon meetings enjoyed the program, which was well presented. George Conley presided in the absence of Don Lyon, Chapter president.

NATIONAL COUNCIL NEWS

On March 26th, James M. Ashley, president of the Producers' Council, urged all architects and builders to adopt the principles of modular coordination on at least one new house or other building so that they may observe for themselves the extent of the savings in construction cost which can be attained. "Those in the industry who thoroughly understand modular design are certain that it will bring about substantial reductions in the cost of building," Mr. Ashley said, "and many designers already are planning buildings on the modular basis. "When a number of these buildings have been completed and the actual savings can be compared and averaged, it will be possible to cite authoritative figures on the economies which have been effected.

"These savings may be even greater than is generally expected, but there is no doubt that they will be great enough to warrant the adoption of modular coordination on at least an experimental scale by everyone concerned with designing and putting up buildings.

"Aside from the economies which arise in on-site construction as a result of reducing the waste of both time and materials, there are further savings in the form of time saved in design, greater mass production in the manufacture of materials, and lower inventories to be carried by producers and distributors. "In addition to the Producers' Council, modular coordination has been endorsed by the American Institute of Architects, the Housing and Home Finance Agency, and other industry groups which have given it careful study. Anyone who actually adopts the plan is certain to be repaid in the form of lower building costs."

COMING EVENTS

There is to be a table top display May 24th and 25th in the Colonial Room of the Hotel St. Francis. This will be our May meeting. More details later, but please reserve these dates, as it will be for your benefit.

MEMBERSHIP NEWS

Our genial president, Don Lyon, returned from a three week trip to the East, and reports he and his family had nothing but good weather. Of course, there was a joke attached to the trip, but the publishers cannot go that far. George Conley seems to be relieved to have Don back on the job, and we know that Don, in turn, appreciates the fine job George has done in his absence.

Louis Saylor reports he had a glorious time in Honolulu last month, but we are still wondering if it was a business trip or not.

LIGHTING AND ARCHITECTURAL DESIGN

(From page 33)

But designing with artificial light embraces much more than hanging a lighting fixture in the center of the room from the ceiling. To design architecturally with light means to take fullest advantage of the tremendous possibilities which the technological development of artificial lighting has presented to us, in order to achieve the fullest practical use and the fullest psychological effect of lighting source in shaping architectural forms.

Building exteriors are no longer solely dependent on the light of the sun. New, undreamed-of architectural forms can be revealed by spilling artificial light over walls and columns or by sculpturing the building by means of accentuating certain parts of the structure with spot lights.

And in interiors, artificial lighting is no longer a poor substitute for "the real thing" but a power in its own right, completely independent from the light of the sun.

The arrival of the windowless building shows most clearly and most concisely that artificial light has advanced from playing a supporting role to being, in a double sense, the real star of the show.

And we, as the producers of the show, are learning to cast it (to stay closely within the metaphor) in a manner which can create in the public sensa-

(See page 38)

RESTORATION—BRITISH

(From page 27)

tention to their ultimate pattern before being rushed into quick and possibly faulty decisions.

I would like to make one last point. To carry through what is in effect one of the most gigantic rebuilding programs ever envisaged in the history of this country will need the backing of **every one** of us. The Government's administration of planning on the one hand and the public's understanding on the other, have a long way to go as yet. The Government must learn to be more flexible in its approach, and the public must realize that the ancient right of the Briton to do what he likes on his own little plot must be qualified if the overall plans are to be all that is desired.

Cooperation should be the keynote today. There is far too much of this "we-are-the-government-you-do-as-you-are-told" attitude on the one hand and "to-hell-with-the-government-we-are-going-to-plod-our-own-little-path" on the other. The great rebuilding schemes of which so many of us have had glimpses in recent years can never materialize under an atmosphere of friction and non cooperation.

The Important Thing is To LIGHT RIGHT

Falling down stairs is just **one** of the many hazards and inconveniences resulting from improper or inadequate wiring.

Certified Adequate Wiring provides enough glareless light in the right places to protect life and limb and to enhance natural beauty of home furnishings, as well.

Your clients—who can hardly be expected to know the technicalities of electric wiring—appreciate your foresight and good judgment when you specify **Certified Adequate Wiring** in their home plans.

Remember: for satisfied clients
for increased home values
for come-again business for you

the important thing is to **light right.** Specify **Certified Adequate Wiring.**

—:—

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street San Francisco 3

E. K. WOOD LUMBER CO.

SAN FRANCISCO General Offices: P. O. Box 1618, Oakland, Calif.
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

BAXCO
CHROMATED ZINC CHLORIDE

CZC

PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK

Specify it in your home
Available through Lumber Dealers

LOS ANGELES
601 W. 5th Street
Phone MIchigan 6294

SAN FRANCISCO
333 Montgomery Street
Phone DOugles 2-3883

J. H. Baxter & Co.

AGENTS FOR **WEST COAST WOOD PRESERVING CO.** SEATTLE, WASH.

HEADLINE NEWS & VIEWS

By E. H. W.

GENERAL business conditions in San Francisco during the early part of this year topped last year and were relatively better than in most sections of the west.

* * *

FIVE hundred new California factories were built, started or announced during 1948, and 654 other California plants completed or announced major expansions, representing some $215,531,000 in investment.

* * *

MORE than one-quarter of the total population growth of the United States between 1940 and 1949 occured in California.

* * *

"THE Administration's substitute for the Taft-Hartley Act, on which hearings have begun in Congress, appears to be little more than a return to the Wagner Act, with a few improvements in the earlier law attempted".—Chamber of Commerce of the U. S.

* * *

THE supply of housing in U. S. cities and towns has increased by more than 22 per cent since 1940, or substantially more than the rate of non-farm population growth for the period:—Construction Industry Information Committee.

* * *

SHIPMENTS of finished steel products rose to record levels in December and the year of 1948, according to the American Iron & Steel Institute.

* * *

UNITED STATES STEEL earned $11.99 per share profit in 1948—Why not share a little profit with the public and reduce the cost of steel for construction?

* * *

PRIVATE home builders added more than 1,000,000 new homes to the nation's supply in 1948, a figure well ahead of the 1947 record:—National Association of Home Builders.

* * *

25,000 Engineers, Architects, Contractors, Wholesalers, Dealers and others interested in heating, ventilating and air conditioning viewed more than 300 exhibits at the recent International Heating and Ventilating Exposition in Chicago.

* * *

FORMATION of a new corporation to build a $210,000,000 overland belt conveyor transportation system between Lake Erie and the Ohio River to be known as the Riverlake Belt Conveyor Lines, Inc., has been annnounced by H. B. Stewart, Jr., President Akron, Canton & Youngstown Railroad.

IN THE NEWS

DOPTS CODE

The Mayar's Committee on the uilding Code of Inglewood, New rsey, after ten months of delib- ration has unanimously recom- ended to the Mayor and Com- on Council of the city the adop- on of the basic building code repared by the Building Officials onference of America, Inc.

The basic building code is the esult of several years study by ore than seventy of the nation's ading code administrators as- sted by scores of consultants.

GYMNASIUM

The Vallejo Unified School Dis- ict has awarded a $151,949 con- act to Mark Bristol of Oakland, r the construction of a gymna- um building for the Franklin Jr. igh School. Of reinforced con- ete construction the building will e 72 x 190 feet.

Harry J. Devine, Sacramento, is ie Architect.

MAUSOLEUM ADDITION

The Roman Catholic Bishop of acramento has awarded a $237,- 96 contract to the Lawrence Con- ruction Company and Edwin J. Mackey of Sacramenta for the con- ruction of an addition to the St. Mary's Mausoleum in Sacramenta. he building will be of reinforced oncrete construction with a mar- le and bronze interior.

Harry J. Devine, Sacramento, is ie architect.

GRAMMAR ADDITION

The Yayon Elementary School istrict of Summit City (California) ave awarded a general contract O'Connor Bros. of Red Bluff for ie construction of a frame and ucco addition to the city's gram- ar school. Cost $47,790.

J. Clarence Felciano, Santa osa, is the Architect.

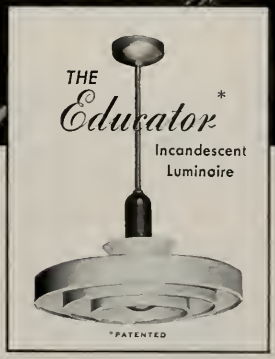
PAINT FACTORY

The General Paint Corporation, an Francisco, has awarded a 70,000 contract to Barrett & Hilp r construction of an addition to ieir paint factory.

MOVES

The Louis C. Dunn Company has oved into larger offices at 3101 Vilshire Boulevard, Los Angeles.

Her torch will help light up school rooms!



Yesterday a strip of steel — tamarraw a special new luminaire developed to meet the exacting requirements of the schoalroam, the drafting room, the modern affice. Wherever ideal vision is vital, the Educator will provide correct intensities af indirect light at the proper level, eliminating glare and annaying shadaws. Result? Less strain — better wark — and no place far waste ar dust to accumulate!

SMOOT-HOLMAN COMPANY
SMOOT-HOLMAN
INGLEWOOD, CALIFORNIA
MADE IN U.S.A. ®

Offices in Principal Western Cities—Branch and Warehouse in San Francisco

Are yesterday's buildings fit for tomorrow?

The demand for newer, better, up-to-date office space goes on—yesterday's buildings must be modernized to meet the competition. Look to your drinking water equipment for a major part of the answer!

Halsey Taylor Drinking Fountains, for instance, are the choice of architects and building owners everywhere. Write!

THE HALSEY W. TAYLOR CO., Warren, Ohio

Halsey Taylor

DRINKING FOUNTAINS

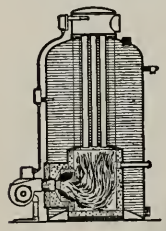
West Coast Plant, Redlands, Calif.

A-2

YOU'LL GET MORE USABLE HEAT FROM EVERY GALLON OF FUEL OIL . . WITH

Johnson Oil Burners

Why? Because, first of all, they give you clean, complete combustion. And second, because they are engineered to reduce heat waste up the chimney to a virtual minimum. The extraordinary "efficiency" of Johnson Burners is a matter of record, known to heating experts the world over. For the S. T. Johnson Co. (one of the *first* builders of oil burners in America) has pioneered in oil-heat engineering since 1903.



If you want true "heating efficiency" install a Johnson Burner. There's a size and type for *every heating job* . . . from heating a skyscraper to firing a baker's oven. See your nearest Johnson Burner dealer, or write direct.

....Johnson Oil Burners...

S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.

LIGHTING AND ARCHITECTURAL DESIGN

(From page 35)

tions of many kinds—from awe-filled admiration to homey coziness, from cool efficiency to sweet romance.

Light, like fire, has a tremendous impact on the emotional core of the human being and architectural design must take this impact in all its aspects into consideration.

Lighting can change the apparent physical character of a room; it can make it appear higher or lower, wider or narrower. By means of lighting, we can direct the interests, and even the movements, of the on-looker, can bring certain objects into the "limelight" and make others appear unimportant. The correct handling of light, which can be master or tool in architectural design, is, in my opinion, one of the foremost tasks of the architect.

I hope you will forgive me for this long excursion into the philosophical background on lighting design and will permit me to give you an example of how we apply this philosophy to practical problems. You perhaps know that my special interest is applied to commercial design—the designing of store buildings and store interiors.

A light intensity of 120 footcandles on the merchandise without glore or shadows was obtained through a metal egg crate ce ing composed of 3-inch by 3-inch cells shielding continuo fluorescent strips on 18-inch centers.

When Mr. Howard Amos leased space adjoining his existing store, Kutler's Mens Shop, 120 East Broadway, Long Beach, California, he came to Gruen and Krummeck with the problem of remodeling the existing space and incorporating his new space into a high-grade men's wear shop.

His new store would have a frontage of 50 feet, but the store itself was only 48 feet deep. In

(See page 43)

IN THE NEWS

ARCHBISHOP HANNA

The Archbishop Hanna Center for Boys, San Francisco, has awarded a contract to Williams & Burrows of Burlingame, for the construction of the first unit of seventeen buildings of the Archbishop Hanna Center for Boys, which is to be built at Boyes Springs in Sonoma County.

The buildings are to be of reinforced concrete, frame, and stucco.

Mario J. Ciampi and J. Francis Ward-John Bolles are the architects, San Francisco.

SHOP BUILDING

The Healdsburg High School District recently awarded a $39,993 contract to Walter L. Olsen of Santa Rosa for the construction of an agricultural shop building at the Healdsburg High School.

Kump & Falk of San Francisco are the architects.

NEW HOUSTON PLANT

The Geo. Rackle & Sons Company of Cleveland, Ohio, manufacturers of concrete and stone products, has opened a new $100,000 manufacturing plant at Houston, Texas, according to George P. Rackle, executive vice president.

ARCHITECT MOVES

Walter H. Rothe A,. I. A., recently announced the removal of his offices to new and larger quarters at 807 West Yakima Avenue, Yakima, Washington.

OPENS ARCHITECTURAL OFFICE

The firm of Bliss & Hurt, Trudell & Berger, Associated Architects, have announced the opening of offices at 717 Market Street, San Francisco.

The organization is successor to the long established office of Bliss & Faville - Bliss & Fairweather. They will conduct a general practice in the commercial and industrial field.

SCHOOL ADDITION

Edwin W. Tracy, Stockton, has been awarded a contract for the construction of an addition to the California Avenue Grammar School in Riverbank at a cost of $68,244.

Anderson & Simonds, Oakland, are the architects.

31 RESIDENCES: The Tilson Construction Company, San Jose, are building 31 residences at an estimated cost of $6,000 each, near San Jose, California.

ROLLER RINK

The Cannon Construction Company, Stockton, have been awarded a $101,350 contract for the construction of a Roller-Skating Rink in Stockton.

ARCHITECT SELECTED

Ernest F. Winkler, San Francisco, architect, has been selected for remodel and construction of an addition to the Ukiah, California, Grammar School.

The Regal Amber Brewing Company has awarded a $229,600 contract to Louis C. Dunn Co., San Francisco, for the construction of a 3-story, class "A" Administration Building at the San Francisco plant.

H. C. Baumann, San Francisco, is the architect.

NAILOCK
ACOUSTI LOCK BOARD
ACOUSTI-CELOTEX
...the Latest and
Best System of
Installing Suspended
Ceilings for
Acoustical Treatment

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Where to place telephones for convenience, quiet, comfort

Plan for telephone service where the users will spend most of their time. It's wise to locate telephones away from busy halls and doorways where noise and distractions are greatest. And besure to plan a resting place for the telephone...and the user.

Modern home planning calls for extra outlets and built-in conduit. The cost of concealed wiring is small; customer-appreciation, great. For free help in planning, call your local Pacific Telephone office and aak for "Architects and Builders Service."

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

FORDERER CORNICE WORKS

Manufacturers of
Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.
SAN FRANCISCO, CALIF. HEMLOCK 4100

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco - DO 8311

MOROCCO ARCHITECTURE

(From page 24)

Servants consider toilet seats unsanitary, therefore where natives are employed Turkish type water closets are used. This consists of a large square, relatively flat enameled bowl placed even with the floor, raised portions with non skid surfaces are in position for the feet. The flush tank is placed above like our old fashioned toilets. Incidently these are also used a great deal in public toilets in Europe in order to avoid possible contamination. Bathrooms have videts, but no toilet which is kept separate.

Heat for these residences is supplied by hot water converter radiators placed under the windows.

Balconies are considered both decorative and useful. Few residences or apartments are without them.

Native residence and "riad," or enclosed garden, of Si i'Caid Bouza a Korifla is a typical example of native architecture. The Caid is the spiritual advisor of his people. His house is used much as a Rectory would be in a Christian country, however, Mohammedan customs differ greatly from ours.

Except in family life, women and men are kept strictly apart. When a guest enters the vestibule he is unable to get a direct view of the courtyard. The entry is usually wainscoted in grey tile or mosaic and provided with a seat, where one waits until all members of the opposite sex have disappeared to their rooms, then he or she is invited into the courtyard, where spiced tea or coffee is served from a low dais or built-in seat. Women usually meet during the day to sew and chat together. Men meet in the evening to smoke or play dominoes.

No dining room is provided because meals are served in large trays that may be carried to any part of the house, patio or garden, where a riad exists men may be gathered there while the women meet in the patio.

Rooms are long and narrow because their width used to be determined by the span of the Palm trunk, usually a maximum of nine or ten feet. They face the interior courtyard for privacy, all exterior windows are extremely small for the same reason, a Mohammedan likes to be able to peek at the street, but not be seen himself. Often exterior openings serve only for cross ventilation.

Planning usually appears rather haphazard because houses are usually built without plans and developed as the construction progress and as Allah willed at the moment.

The bath is a steam room or Turkish bath, Mohammedans are fastidious, washing five to seven

(See page 44)

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—

Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$60.00 to $90.00 per M, truckload lots, delivered.

Cartage—Approx. $9.00 per M.

BUILDING PAPER—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.60 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.

Sash weights, cast iron, $100.00 ton.

Nails, $5.50 base.

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.94
Crushed Rock, ¾" to 1½"	2.38	3.13
Roofing Gravel	2.81	3.50
River Sand	2.50	3.06
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.02 per bbl. f.o.b. car; delivered $3.60.

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White — 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—1/8"—$3.50 sq. yd. 1/8"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

25/32 x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

25/32 x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

25/32" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .50 per □ ft.
Double Strength Window Glass	.65 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
Polished Wire Plate Glass	2.50 per □ ft.
Rgh. Wire Glass	.65 per □ ft.
Obscure Glass	.45 per □ ft.

Glazing of above is additional.

Glass Blocks $2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common..... $85.00 per M
No. 2 Common..... 83.00 per M
Select O. P. Common..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	18c to 20c per ft.
Plyscord	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—

Red Cedar No. 1—$13.00 per square; No. 2, $10.50; No. 3, $9.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—Tapered: ½ " to ¾" x 25"—$17.00 per square.
Resawn: ¾" to 1¼" x 25"—$22.00 per square
Average cost to lay shakes,— 8.00 per square

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

MARBLE—(See Dealers)

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine..... $1.85 per gal. in 5-gal. cont.
Raw Linseed
Oil..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed
Oil..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement
Oil..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Seilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLILme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.

Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
Redwood Shingles, $15.00 per square in place.
5/2 #1-16" Cedar Shingles, 4½"
Exposure ..... $18.25 square
5/8 x 16"—#1 Cedar Shingles, 5" Exposure ..... $18.00 square
4/2 #1-24" Royal Shingles, 7½" Exposure ..... $23.00 square
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $24.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $29.00
1 x 25" Resawn Cedar Shakes, 10" Exposure 22.00

Above prices are for shakes in place.

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvanized iron, 65c sq. ft. (flat).
Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill
$270 per ton erected, when out of stock

STEEL REINFORCING—

$200.00 per ton, in place.

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.75 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$2.00 per sq. ft.
Asphalt Tile Floor ⅛" x ⅝"—$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—

Glazed Terra Cotta Wall Units (single faces laid in place—approximate prices:

2 x 6 x 12 ..... $1.25 sq.
4 x 6 x 12 ..... 1.50 sq.
2 x 8 x 16 ..... 1.45 sq.
4 x 8 x 16 ..... 1.75 sq.

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—

60c per square foot, $5 for vantilators.

LIGHTING AND ARCHITECTURAL DESIGN

(From page 38

this space Mr. Amos desired complete departments for coats and suits, sportwear, shirts, underwear, pajamas, sweaters, ties and hats, along with necessary facilities for operaiton of a store, such as fitting rooms, stock rooms, wrap counter, etc. As his location was in a highly competitive area, it was most imperative to have very attention-getting and outstanding show windows.

All these requirements in this comparatively small area posed a rather difficult problem. The apparent size of the store was increased by the introduction of a canopy which forms a continuation of the ceiling treatment of the store, thus enlarging the ceiling area by the portion which is located in front of the show-windows, over-hanging the sidewalk.

This newly-created ceiling area, which is much larger than the store itself, was treated as a uniformly glowing surface by the introduction of an egg-crate louver system with warm tone fluorescent lamps located avobe the louvers. The show window backgrounds are kept below the ceiling, thus allowing the lighting and ceiling effect to carry through without interruption, giving a sense of space to the store.

The metal egg-crate ceiling is composed of 3-inch by 3-inch cells supported on "T" members. Above the egg-crate ceiling are continuous rows of fluorescent strips mounted on centers 18 inches apart. Much study was given to the proper placing of these strips to obtain a uniform, well-lighted ceiling space. A reading of 120 foot candles is obtained by this means of lighting. Because the entire ceiling is a source of light, there are no shadows created; the merchandise stands out very strongly in its natural colors.

BUILDING TRADES WAGE (JOB SITES) NORTHERN AND CENTRAL CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to April, 1949.)

CRAFT	San Francisco	Alamede	Contra Costa	Fresno	Sacramento	Santa Clara	Solano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	3.00	2.81¼	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.0375	2.0375	2.0375	2.0375	2.1125
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.121½	2.121½	2.121½	2.121½	2.121½	2.121½	2.121½	2.121½	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.371½	2.371½	2.371½	2.371½	2.371½	2.371½	2.371½	2.371½	2.2375	2.2375	2.2375	2.2375	2.2375
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.47½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.00*	2.50*	2.81¼	2.81¼	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.2375	2.2375	2.2375	2.2375	2.2375
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.50*	2.81¼	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.16	2.16	2.16	1.87½	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81¼	2.81¼	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.00	2.67½	2.67½	2.43¾	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

CONSTRUCTION ENGINEER (CIVIL)
GENERAL SUPERINTENDENT
PROJECT MANAGER

Twenty five years of wide practical experience on frame, steel, concrete and masonry bldgs. of all types. Estimeting, sub-division, sales, detailing & specification writing background. Dependable, energetic. Excellent local references. Have car. Free to travel. P.O. Box 807, San Meteo, Calif.

WANTED: Product Engineer with experience wented as a permenent addition to the steff of an industriel Development Department located in Minnesota. Work involves product development including travel for consumer contacts. Program reletes to products from wood. Submit details education, experience, references, salery requirement, photograph. All replies considered confidentiel and will be acknowledged. Reply Box 238, Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

ENGRAVING—Good engrevings are essential to a satisfactory job of printing reproduction. For the best, see Poor Richerd Photo Engreving Co., 324 Commercial St., San Francisco.

WANTED: Top architecturel designer, renderer, draftsmen of ebility, by long estebished central western office.

Modern designer with background of historical architecture.

University graduate, European travel end study, or training at Americen Academy of Rome.

Good background, initiative, diplomatic, pleasing personelity.

Prospective future partnership.

Furnish complete informetion, references. Box 110, Architect & Engineer, 68 Post St.

PHOTOGRAPHY: Building, Construction, Publicity, Aerial photographs by thoroughly experienced Photographers. Black & White, Color, Stills and Motion Pictures. DEB Photos, 929 Hearst Building, San Francisco.

All the lines of the show windows, ceiling treatment, fixture layout, and carpeting are correlated so that the desired effect of a much deeper store is created. The piers of the show windows are of tan ruffled Roman brick, laid vertically, and act as a foil for the strong diagonal lines. The plate glass of the show windows is set into the joints without metal moldings so that the glass is hardly visible and forms no barrier between the observer and the merchandise displayed. The fixtures are of stained oak. Carpeting is seafoam green in color.

I hope that with this practical example we have shown you how we are trying to make our contribution to design with light, which in my opinion should not be an incidental problem of architectural design but one of its basic elements.

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

NAMED NORTHWESTERN DISTRICT SALES MANAGER

Robert E. Daly has been named Northwestern district sales manager for the National Radiator Company of Johnstown, Pa., and has established offices at 3355 E. 182nd Street, Seattle, Washington.

Daly is well known in the heating industry having served as a member of the Department of Commerce committee on simplified practice recommendations for radiators, and was qualified to serve as a member of the IBR technical committee which developed the IBR rating and testing code.

STORE BUILDINGS

Albert R. Williams, Architect, San Francisco, has a new store building in Eureka, California, comprising six individual stores. Fred J. Maurer, Eureka, is the general contractor. Estimated cost of construction is $102,500.

GRAMMAR SCHOOL

The Spears Construction Company of Modesto has been awarded a general contract for the construction of a frame and stucco, 7-class room, office and toilets, grammar school building near Modesto. Frank Mayo and Eric Johnson, Stockton, are the architects.

SCHOOL BUILDING

The Clovis (California) Elementary School District have awarded a general contract to the Larsen-Ratto Construction Company of Fresno, for the construction of a frame and stucco grammar school building at Clovis. Horn & Mortland of Fresno are the architects.

MOROCCO ARCHITECTURE

(From page 40)

times a day, but do not use tubs, for they prefer not to sit in their own dirty water, but the equivalent of a shower. Buckets of hot water are first used as a basin and then the contents are poured over them.

Any home that can afford it has its fountain. In this particular house fountains are connected by raised ways where water runs from one pool to the next.

The rough stone of the exterior is stucco. Interiors are finished in various colors of lime wash and wrought iron grills usually cover windows within reach of the street. Color is added to the exteriors by the use of a sea green tile peculiar to this country.

Moroccan buildings show a freedom and imagination that is rarely found elsewhere.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

AUDELS HOUSE HEATING GUIDE. Theo Audel & Company, 49 W. 23rd St., New York 10. Price $4.00

Presents working principles of modern house heating, ventilating, and air conditioning systems; 1000 pages, 910 illustrations, 57 chapters, in three major parts.

STORES MODERNIZE WITH MARBLE. Marble Institute of America, Inc. A.I.A. File No. 22-A.

A pamphlet containing photographs, and charts on the uses of Marble for exterior and interior building. Also lists the membership of the Marble Institute where complete information may be obtained on samples, service and estimates on the costs of imported and domestic marble.

LIGHT GAGE STEEL MANUAL. American Iron & Steel Institute, 350 Fifth Ave., New York.

Publication of a "Light Gage Steel Design Manual" for the use of architects, designers, and structural engineers has been completed by the Committee on Building Codes of the American Iron and Steel Institute. It supplements the pamphlet published in 1946, and includes design charts and the structural properties of the structural members cold-formed from light gage steel.

COLE VALVE COMPANY

The Cole Valve Company of Duluth, Minnesota, have introduced three new standard model faucets for use in a wide variety of installations.

This new product provides the plumbing industry with its first all-forged brass mixing faucet which extensive tests have proved to be convenient, safe, economical and dependable.

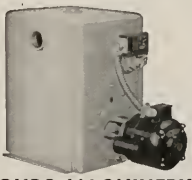
Individual handles for temperature and flow enable the user to have a controlled volume of water at any desired temperature with only two moving parts. One is the temperature mixing valve which is self honing, self adjusting which practically eliminates wear and corrosion, and the other is the flow stem which incorporates the "Maytag" seal, a complete departure from the old type washer.

SHOP BUILDING

H. W. Robertson, Sacramento, has been awarded a general contract for the construction of a reinforced concrete and frame agricultural shop building at the Elk Grove High School at a cost of $158,032. John W. Gloe, San Francisco, is the architect.

"AMERICAN - MARSH"
CONDENSATION UNIT

Pumping Machinery for Every Purpose



For Service Call DOuglas 2-6794 or MUtual 8322

SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834
GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer
REPUBLIC STEEL
See Sweet's Catalog File or write us for full information.
REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO
DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. 5-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

IN THE NEWS

BOWLING ALLEY

Willis F. Lynn, Berkeley, has been awarded a $137,300 contract for the construction of a 16-alley and 12-billiard table building in Albany. Rudolph Igaz, San Francisco, is the architect.

RESEARCH LAB

A general contract has been awarded to Carrico & Gautier of San Francisco for the construction of an Instrumental Research Laboratory Building at Moffett Field which will cost $566,087.

The building will be 2-story and basement, concrete and reinforced steel.

MEDICAL BUILDING

Oliver C. Jensen, Campbell, has been awarded a $22,000 contract for the construction of a Medical Building in Campbell, Santa Clara County. Donell E. Jaekle, San Jose, is the architect.

GYMNASIUM

The Van Bokkelen-Cole Company of Oakland has been awarded a $187,921 contract for the construction of a frame and stucco gymnasium building in Susanville and Bieber, California, for the Lassen Union High School District.

NEW HIGH SCHOOL

Ted F. Merrill, Inglewood, has been awarded a $1,425,000 general contract for the construction of thirteen buildings for the Visalia Union High School District. H. L. Gogerty, Los Angeles, is the architect.

HIGH SCHOOL

The Kern County Union High School District has awarded a $1,618,883 contract to Guy E. Hall Construction Company of Bakersfield for construction of an addition to the High School at Arvin. Ernest L. McCoy, Bakersfield, is the architect.

PEBBLE BEACH LODGE

Del Monte Properties Company have awarded a contract to Barrett & Hilp of San Francisco in the amount of $235,383 for the construction of a new Lodge addition to the Pebble Beach property. Gardner A. Dailey, Skidmore, Owings & Merrill of San Francisco are the architects.

WAREHOUSE

The M. J. King, Inc. of San Francisco, has been awarded a $100,000 contract for the construction of a warehouse and office building in Oakland, California. J. Lloyd Conrich, San Francisco, is the architect.

MEMORIAL BUILDING

Anderson-Haglund, Inc., Oakland, have been awarded a $125,495 contract for the construction of a Veterans' Memorial Building in Alameda for the County of Alameda.

Kent & Hass, San Francisco, are the architects.

100 RESIDENCES

The M. J. King organization, San Francisco, has announced the start of 100 residences to be built near Redwood City in San Mateo county. The homes are to be of frame and stucco construction and will represent an average cost of $8,000 each.

GIRLS' SCHOOL

Swinerton & Walberg of San Francisco have been awarded a $220,000 contract for the construction of a Girls' Private School building in San Francisco for the Katherine Delmar Burke School. Donald Beach Kirby and Thomas B. Mulvin, San Francisco, are the architects.

MEDICAL BUILDING

Leonard English, Santa Cruz, has been awarded a $52,000 contract for the construction of a 7-suite Medical building in Santa Cruz.

PAROCHIAL SCHOOL

Carrico & Gautier, San Francisco, has been awarded a general contract of $353,210 for the construction of a 16-classroom, office, kindergarten, library, cafeteria and gymnasium Parochial School for the Roman Catholic Archbishop of San Francisco.

Blanchard & Maher, San Francisco, are the architects.

ELEMENTARY SCHOOL

C. F. Parker, San Francisco, has been awarded a $242,847 general contract for the construction of an 8-room, kindergarten administration unit, and toilet rooms Grammar School in San Leandro, California.

Dragon, Schmidts & Harmon, Berkeley, are the architects.

SCHOOL ADDITION BONDS

The Rio Vista Elementary School District has submitted a proposed $400,000 bond issue to voters of the district for construction of an addition to the Grammar School. Dragon, Schmidts & Harmon, Berkeley, are the architects.

CAFETERIA

Oppenheim & King of Fresno have been awarded a $173,397 contract for the construction of a Cafeteria Building addition to the Sunset School in Coalinga, California. W. D. Coates and M. J. Metz, Fresno, are the architects.

EXHIBIT BUILDING

The 35th District Agricultural Association, Merced, California has awarded a $76,453 contract to the Harris Construction Company of Fresno, for the construction of a new exhibit building at the fairgrounds in Merced.

MISSION REBUILT

The Roman Catholic Archbishop of San Francisco has awarded a $33,000 contract to O. C. Morone of Burlingame, for reconstruction of the Mission San Jose at Mission San Jose Guadalupe, Alameda County. Arnold Constable, Sausalito, is the architect.

Yes, CABOT'S STAINS

Give Natural Beauty

To any design in any site

Colors that Stay True
A Superior Wood Preserver
Cost 1/3 as much as good paint

GUNN CARLE & CO

20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

STATIONERY
SCHOOL & OFFICE
SUPPLIES
•
Printing Engraving
Announcements
•
CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

THE TORMEY COMPANY
GENERAL PAINTERS AND DECORATORS
Phone UNderhill 1-1913
563 FULTON STREET
San Francisco

MULLEN MFG. COMPANY
BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY
CHURCH SEATING
Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Thinking of Building?
From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.
SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO - SACRAMENTO
OAKLAND - LOS ANGELES - DENVER

HOME ECONOMICS

The Stockton Board of Education has awarded a general contract to George Roek of Stockton, for the construction of a $257,490 Home Economics and Cafeteria Building at the Edison High School in Stockton.

J. Upton Clowsley, Stockton, is the architect.

NEW COURT HOUSE

Mendocino County has awarded a general contract to Carl N. Swenson Company of Stockton for the construction of a new 4-story reinforced concrete and structural steel County Court House and Jail in Ukiah. C. A. Caulkins, Jr., Santa Rosa, is the Architect.

ARMORY

The Modern Building Company of Chico has been awarded a $70,912 contract by the State of California for the construction of an 11,000 sq. ft., one-story, reinforced concrete and steel Armory Building to be built in Willows, California.

AUDITORIUM

Bids for construction of a new auditorium building for the Clovis Union High School have been rejected, according to a report from the architectural office of Frank Wynkoop and Associates in Fresno, California. Cost of bids submitted was $280,286.

BUS GARAGE

The Modern Building Company of Chico, California, has been awarded a $13,172 contract for the construction of a bus garage at the Auburn High School.

GRAMMAR SCHOOL

The Berlinger Construction Company, Chico, has been awarded an $84,686 contract for the construction of a new grammar school near Redding, California. J. Clarence Felciano, Santa Rosa, is the architect.

VETERANS BUILDING

G. O. Griffith, Auburn, has been awarded a $44,071 contract for the construction of a frame and brick veneer addition to the Veterans' Memorial Building in Auburn, California.

Raymond R. Franceschi, Sacramento, is the architect.

MARKET BUILDING: N. J. Nielsen, San Jose, has been awarded a $30,248 contract for the construction of a new market building in San Jose, according to Gilford E. Sobey, architect.

Scott Company
HEATING • PLUMBING
REFRIGERATION
★
San Francisco
Oakland
San Jose
Los Angeles

DINWIDDIE CONSTRUCTION COMPANY
•
BUILDERS
•
CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA
HERRICK IRON WORKS
STRUCTURAL STEEL
REINFORCING STEEL
18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164
Thomas B. Hunter
DESIGNER OF HEATING
AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS
★
41 SUTTER STREET
ROOM 710
San Francisco California

Brownskin
VAPORSEAL
The resilient building paper creped to S-T-R-E-T-C-H
Quality Products Since 1895
ANGIER PACIFIC CORPORATION
55 NEW MONTGOMERY ST. SAN FRANCISCO 5, CALIF.
7424 SUNSET BOULEVARD LOS ANGELES 46, CALIF.
A complete line of Angier products available from your building material dealer

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard
Interior Trim — Gutters
Special Moldings

The place to SAVE

is

LUMBER MANUFACTURING CO.

225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

Index to Advertisers

ANGIER Pacific Corp. 48
ARCHITECTS Reports 40

BAXTER & Company, J. H. 36
BURKE, W. J. & Co. *

CLARK, N & Sons *
CLASSIFIED Advertising 43
CENTER Stationery 47
CLINTON Construction Company 44
CONTINENTAL Water Heater Co. *

DETROIT Steel Products Co. 3
DINWIDDLE Contruction Co. 47
DUFFY Tile Co. 48

FIREBRICK Construction Co., J. N. J. *
FORDERER Cornice Works 40
FULLER, W. P. Co. *

GLADDING, McBean & Co. *
GUNN, Carle & Company 46

HANKS, Inc., Abbott A. 48
HAWS Drinking Faucet Company 30
HERRICK Iron Works 47
HOGAN Lumber Company 44
HUNT, Robert W., Company 48
HUNTER, Thos B. 47

JOHNSON, S. T. Co. 38
JUDSON, Pacific-Murphy Corp. 40

KRAFTILE Company 31
LUMBER Manufacturing Co. 48

MARBLE Institute of America *
MATTOCK, A. F. Co. 48
MICHEL & Pfeffer Iron Works Inside Back Cover
MILLER Company, The 33
MULLEN Mfg. Co. 47

NORTHERN California Electric Bureau 35

PACIFIC Clay Products Co. *
PACIFIC Coast Gas Association *
PACIFIC Manufacturing Company 45
PACIFIC Portland Cement Company Back Cover
PACIFIC Telephone & Telegraph Co. 39
PITTSBURGH Testing Laboratory 48
POOR Richard Engraving Co. *

REMILLARD-Dandini Co. 48
REPUBLIC Steel Corporation 45

SCOTT Co. 47
SECURITY Valve Company 32
SIMONDS Machinery Company 45
SIMPSON Logging Co. *
SISALKRAFT Company 44
SMOOT-Holman Co. 37
SOULE Steel Co. *
STANLEY Works, The *
SWINERTON & Walberg Co. 47

TAYLOR Co., Halsey W. 38
TORMEY Company, The 47

U. S. Bonds Inside Front Cover

VERMONT Marble Company 45

WESIX Company *
WESTERN Asbestos Co. 39
WOOD, E. K. Lumber Company 36

*Indicates Alternate Months

TILE CONTRACTORS

Shower Doors, Tub Enclosures
Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

DUFFY TILE CO.

253 Minne St., S. F. YUkon 6-1489

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company

ENGINEERS

Inspection - Tests - Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

ARCHITECT AND ENGINEER

$1,000,000 MOVABLE RAILROAD BRIDGE, OAKLAND, CALIFORNIA

PUBLIC LIBRARY
MAY 31

Design by U. S. Corps of Engine

MAY 1949

Unusual home in *Sleepy Hollow Acres, Fairfax, Calif.* Sweeping exterior lines conform to steep hill contours. Automatic gas cooking and hot water service contribute to owner-pleasure in the Pullman-type kitchen.

Gas-Equipped
Award Winner

Francis E. Lloyd, A. I. A., San Francisco, enjoys widespread recognition for his proficiency in contemporary design – exemplified by this "gas-equipped award winner" in a national small-homes competition.

Today's finest homes, created by leading architects and builders... overwhelmingly favor *gas* equipment. In California, this trend sets the highest standards for gracious living.

Client satisfaction is assured when you recommend... GAS

PACIFIC COAST GAS ASSOCIATION

• ARCHITECT AND ENGINEER

Vol. 177 No. 2

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

FRUITVALE AVENUE
ESTUARY BRIDGE

Replacement of the railroad facilities across the estuary in Oakland, California, with a new vertical lift bridge having 200 ft. clearance between fenders and clearance of 13 ft. closed and 135 ft. open, will cost some $1,000,000. Designed by U. S. Corps of Engineers.

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

MAY

EDITORIAL NOTES 4

NEWS & COMMENT ON ART 7
San Francisco Architectural Club, Design Winner Charles Dennis

FLOOR COVERING TRENDS INDICATED IN SURVEY 9

AMERICA'S GREATEST VENTURE IN TUNNELS 10
The Brooklyn-Battery Tunnel, New York. By Dr. W. Schweisheimer

PLANS FOR THE EARTHQUAKE ENGINEERING RESEARCH INSTITUTE . 13
By John A. Blume, Engineer

A HOUSE THAT OWNERS HELPED TO DESIGN 14
Mr. & Mrs. John W. Seibert, Pasadena. By Elmer Grey, Architect

ORVILLE WRIGHT ELEMENTARY SCHOOL, Modesto, California . . . 18
Fred L. Swartz & William G. Hyberg, Architects

OAK HILL ROAD RESIDENCE 22
Mr. & Mrs. W. B. Roland, Oakland, California.
James Allan Daley & J. Wells Hastings, Architects

A. I. A. ACTIVITIES 27

WITH THE ENGINEERS 32

PRODUCERS COUNCIL PAGE 34
J. Wilson Peele, Editor

HEADLINE NEWS & VIEWS 36
By E. H. W.

IN THE NEWS 37, 39, 46

ESTIMATOR'S GUIDE, Building and Construction Materials 41

BUILDING TRADES WAGE, Northern, Central, Southern California . . 43

CLASSIFIED ADVERTISING 43

BOOK REVIEWS, Pamphlets & Catalogues 45

INDEX TO ADVERTISERS 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Peshorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28, Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office, Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

EDITORIAL NOTES

ENGINEERING EDUCATION A GIFT OF BIG BUSINESS

The California Institute of Technology has just announced the names of the first two winners of the Howard Hughes Fellowship in Creative Aeronautics. Leo Stoolman of Illinois and Harold M. Hipsh of California have been selected for these fellowships because of their unusual technical ability, originality and personality.

Each will receive a salary for advanced development work at the Hughes' Culver City aircraft plant, and in addition, a fund established by the aviation pioneer and designer will provide a year of paid tuition at Caltec graduate school and a cash gift to each young man for personal expenses during the year.

Thus the generosity of American big business men, such as Howard Hughes, makes a reality in opportunity for deserving young men and women.

* * *

"It is our duty to make the best of our misfortunes and not suffer passion to interfere with our interest and public good."—George Washington.

* * *

PARALLEL CROSSING SAN FRANCISCO BAY

There is one factor in the various suggestions pertaining to the construction of an additional crossing of San Francisco Bay which seems to meet with unanimous approval—and that is the urgent need for such a crossing to meet increasing traffic flow between Bay Area communities.

From that point on, however, the modus operandi veers from generally conceded basic need to just about any and every sort of interpretation of the facts under consideration.

Civic leaders, labor organizations, and city and county officials—representing by far the majority of people who use the present bridge in the normal conduct of their every day business—advocate and strongly support plans for immediate construction of a parallel bridge.

Other groups and interests—with far less daily utility use of any bridge crossing—protest the parallel bridge, and the "reasons" given frequently represent considerations quite far removed from practical, and factual conditions.

In announcing the unanimous vote of the California Toll Bridge Authority which recently went on record as favoring the immediate building of a second San Francisco Bay crossing paralleling the existing San Francisco-Oakland Bay Bridge, there is considerable logic and sound judgment in the "reasons" given by Governor Earl Warren in support of the recommendation.

"The parallel bridge will better serve 82% of the traffic that will use it. The southern crossing only 18%.

"With conditions as they are today, it will be possible to maintain a 25c toll on the existing bridge and a new parallel crossing. It would be necessary to increase the toll to 35c on the existing as well as the southern crossing.

"The parallel bridge will relieve the congestion immediately upon its completion. The southern crossing will not relieve the congestion at any time.

"The parallel bridge, including approaches, can be completed two and a half years sooner than a southern crossing.

"The parallel crossing can be constructed more cheaply.

"Safety to traffic will be greatly favored by a parallel bridge.

"The cost of maintenance and operation of two parallel bridges will be cheaper by more than $400,000 per year than the cost of maintenance and operation of a combination of the present bridge and a southern crossing."

In the final analysis the cost of constructing a second bay crossing will be paid by the motorist using the bridge, why should there be any consideration of the matter other than to best serve the motorist?

* * *

THE RECORD SHOULD SPEAK FOR ITSELF!

The officers of the National Association of Home Builders and of the Mortgage Bankers Association of America, representing the home building and financing industries, met in Chicago recently to discuss the problems of home construction and finance confronting the nation. At the conclusion of the conference, they stressed their confidence in the ability of private enterprise to adequately meet the housing needs of the country.

The group urged that instead of the Federal government interferring with the accomplishment of this objective by engaging in the business of building, owning and operating homes, and by direct government lending, it should concentrate on assisting private enterprise by improving the government facilities which are now available.

The splendid record of private enterprise to meet American home construction requirements, will eventually be recorded by historians as one of the major accomplishments of post World War II era.

NEWS AND COMMENT ON ART

CALIFORNIA SCHOOL OF FINE ARTS

Dorr Bothwell, San Francisco artist, has been awarded the 1949 Abraham Rosenberg Traveling Fellowship and will spend a year in France making an intensive study of sculpture of the Middle Ages. A member of the faculty of the California School of Fine Arts, Miss Bothwell was formerly associated with Dorothy Wright Liebes and has designed numerous textiles and wall papers.

* * *

The recent Western Round Table on Modern Art discussed the problems: "Why does an artist make a work of art?", "What is the function of the critic?", and "Why are art works collected, and what is the function of the museum?"

Frank Lloyd Wright, one of the panel members took the position "modern art is a crime without passion; modern art is a commodity in the hands of the dealers; the museum is a morgue, and the museum impresario a mortician."

Organized by Douglas MacAgy the discussions were considered as a stimulant to several phases of modern art thinking.

* * *

Summer Class Program. Courses embracing the complete field of fine arts, as well as applied arts, will be offered this summer, with Mark Rothko, outstanding American artist and Edward Weston, celebrated photographer, joining the school's faculty.

Rothko will give a course in the philosophy and practice of contemporary painting, while Weston will conduct special classes at his Carmel studio.

* * *

Plans have been announced for a major exhibition of photo-murals, plans, and models of homes created by leading architects of the Bay Region. The exhibition will be held in the main gallery of the Museum during the months of September and October.

Following its showing here the exhibit will be circulated in Museums and schools throughout the United States by the American Federations of Arts.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, will present thirty years of painting by Max Ernst, consisting of seventy pictures and sculptures and fills four Museum galleries, through May 29th.

Born at Bruhl near Cologne in the Rhineland in 1891, Max Ernst made his first drawings in 1896 and all of his works are extremely strong personal expressions, surrealist perhaps, but essentially paintings of Max Ernst. The collection was organized through the cooperation of William N. Copley of Hollywood.

* * *

EXHIBITIONS: The Paul Klee Retrospective Exhibition (Museum of Modern Art Exhibition) will be shown only to the early part of May; Paintings by Max Ernst, through May 29; Photographs by Morris Huberland, through May 22; Haitian Painters of Today, May 22; Design in the Living Room, through June 20; New Paintings from Baltimore and Washington, through June 12; the Museum of Modern Art Exhibition, New American Painters, through June 20; and Sculptures by Carroll Barnes, through June 19th.

* * *

Dr. Grace L. McCann Morley, currently on leave from the San Francisco Museum of Art to serve as head of Museums under the United Nations Educational, Scientific and Culural Organization, has been awarded the Chevalier of the Legion of Honor by the French government in recognition of outstanding services in her specialized field. She expects to return to San Francisco early this fall.

SAN FRANCISCO BEAUX-ARTS INSTITUTE OF DESIGN

The Class C Problem, to be completed between April 18 and June 13 will be "A Beach Club," with the program written by Carl Koch of Belmont. Judgment of the project will be made on June 18th.

The Class A and Class B Problems are to be completed before June 20th with judgment made from July 5 to 8. The sketch problems will be judged at the same time and are of nine hour duration, to be done any day in May. The Class B Problem was prepared by Clifton C. Flather of Albany, New York, and is entitled "A College Dormitory." The B Sketch is called "An Entrance to a Seafood Restaurant" and the A Sketch is entitled "A Main Entrance Door for a Wood Industries Building" and is given by James J. Chiarelli of Seattle, Washington.

CITY OF PARIS

The City of Paris, San Francisco, will offer the 8th Annual Pacific Coast Ceramic Exhibition and sale of pottery and sculpture from May 10th to June 4th. This exhibition, sponsored by the City of Paris, is organized by the Art in Action Shop and has for its objective 1) to stimulate artists in production of high standards by bringing together annually the best examples of ceramic sculpture and pottery being developed in the West, and 2) to widen the appreciation and interest of the buying public in ceramics of original design and fine

workmanship for the household.

The jury for selection and award will consist of: Cecilia Graham, Margaret Jipp, William Manker, Hal Riegger, Herbert Sanders, Lillian Boschen, and Beatrice Judd Ryan.

* * *

The Pictures of the Month, in the Art in Action Shop will feature Serigraphs by Millard Sheets and Martinez. Also shown will be Guatemalan Textiles for your Summer Cabin for folk dancing or country costumes; and a demonstration on the Weav-Rite Loom.

THE PHILADELPHIA ART ALLIANCE

The Art Alliance Medal for the best example of contemporary architecture by an architect, other than a Philadelphian, was awarded to William A. Ganster and the offices of W. L. Pereira of Waukegan, Illinois, for their design of the Lake County Tuberculosis Sanitorium in Waukegan.

Burnham Hoyt of Denver, Colorado, won first Honorable Mention for his design of the Red Rocks Amphitheatre, Denver; and Pietro Belluschi of Portland, Oregon, was awarded second Honorable Mention for his design of the Equitable Savings and Loan Building in Portland.

ARCHITECTURAL LEAGUE OF NEW YORK

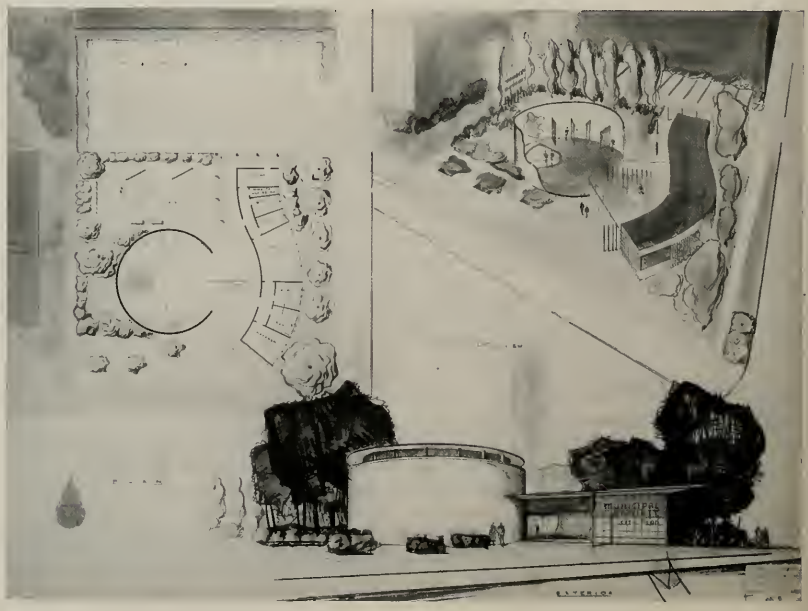
"The Altar of Steel," a dramatic painting on stainless steel by Buell Mullen, was on recent

(See Page 40)

SAN FRANCISCO ARCHITECTURAL CLUB—Design Winner

In the recent national competition of the Beaux Arts Institute of Design, Class C, Problem 1, a "Municipal Exhibit and Information Center for display of the city plan and projects", executed by Charles Dennis of the San Fancisco Architectural Club was awaded "First Mention". The portion at the right of the project is the executive offices; the circular portion is the display and exhibit area; the automobile parking area is located in the rear.

The critic for this project was Ernest Born, A.I.A., Architect, San Francisco, while the program for the competition was developed by George Nemeny, Architect of New York.



FLOOR COVERING TRENDS INDICATED IN SURVEY

One of the significant trends in the 1948 building picture is the increased demand for smooth-surfaced, resilient flooring for installations which was rarely considered a generation ago.

Such flooring was seldom used in the past in locations other than the home bath-room and kitchen, and only occasionally in public and commercial buildings. Today asphalt tile, cork tile, linoleum and rubber tile enter the calculations of architects for every room in the home and for virtually every kind of commercial, public and industrial structure.

How the trend is shaping up is indicated in a recent survey of 251 leading architects. Of these, 129, or more than half, plumped for some form of resilient, smooth material as "the nearest approach to a universal, all-purpose flooring." The survey embraced 14 materials, ranging from carpet to marble.

Undoubtedly the preference for resilient floorings stems from recent vast improvements in the various resilient materials and from today's unprecedented demand for color and design in floors.

Research and improved manufacturing methods have brought to the resilient materials longer life; greater color selection; easier, better installation methods. Since underfoot comfort of a resilient material and a smooth surface which permits easier cleaning are combined with durability at low cost and extensive color choice in some of the floorings, it is easy to understand the preference for asphalt tile, rubber, linoleum and cork.

Enters Traditional Strongholds

Even home bedrooms, living-rooms and dining-rooms, traditional strongholds of other flooring, now come in for treatment with smooth, resilient flooring. In bedrooms, 12 of the architects prefer to use cork tile, rubber, asphalt tile or linoleum. For living-rooms, cork tile was first choice among the resilient, smooth materials; linoleum second; and asphalt tile third. Cork was first for dining-rooms; asphalt tile second; linoleum third. In home hallways rubber was the preferred smooth, resilient flooring; asphalt tile second; cork tile third.

Top Preference for Basements

The architects queried preponderantly chose asphalt tile with 105 votes above all other materials for home basements and put it at the head of the list of smooth, resilient floorings for first-floor utility rooms. Linoleum and rubber, in that order, were named for home kitchens and baths with asphalt tile third choice. Recent development of greaseproof asphalt tile is expected to increase still further the use of this material in kitchens.

Resilient Apartment Floors

The picture is similar for apartment buildings, an even greater number of architects saying they prefer smooth, resilient floors here than the number voting for them in the one-family home. For apartment kitchens linoleum was first; asphalt tile second; and rubber third over all materials. Of the smooth, resilient floorings, linoleum, rubber and asphalt tile were chosen in that order for apartment bathrooms; in dining-rooms it was asphalt tile, rubber and cork tile; in living-rooms and bedrooms, asphalt tile, cork tile and linoleum; apartment lobbies and halls, asphalt tile, rubber and cork tile.

First Choice for Schools

When it came to public buildings, the architects voted asphalt tile in first place in preference to all other materials for school classrooms and corridors. The long life, quietness and anti-slip properties of this material were factors in its selection. In hospital wards and corridors, 76 architects preferred one of the smooth, resilient floorings compared with the 54 who voted for terrazzo. The vote was rubber, linoleum, asphalt tile in that order. For hospital private rooms the order was changed somewhat with rubber heading the list, followed by terrazzo, asphalt tile and linoleum. For libraries, the choice was cork tile, rubber and asphalt tile in preference to non-resilient materials.

Greater Use In Stores

Growing preference for smooth, resilient floorings in stores is shown with asphalt tile a close second to terrazzo in department, variety, grocery and drug chain stores.

For commercial offices and reception rooms, asphalt tile was first choice over any material, rubber second. Twenty-two architects would floor commercial building corridors with asphalt tile and 22 others would use rubber tile. Rubber was first

(See Page 12)

WORK advances behind a heavy iron shield, moving foward 32 inches at a time to permit the next ring to be anchored.

America's Greatest Venture In Tunnels——

THE BROOKLYN - BATTERY TUNNEL NEW YORK

By DR. W. SCHWEISHEIMER

Sometime in 1950 the longest tunnel in the United States and longest underwater vehicular tunnel in the Western Hemisphere will be opened to traffic: the twin tubes of the Brooklyn-Battery Tunnel beneath New York Harbor.

It is an outstanding example of engineering boldness and efficiency. From portal to portal the tunnel measures 9,117 feet, and is 654 feet longer than the Holland tunnel in New York which was the world's longest vehicular tunnel when it was opened in 1927 at a cost of more than 48 million dollars. England's combination highway-and-tramway Mersey River Tunnel stretches 15,154 feet between Liverpool and Birkenhead. Even this great single-tube tunnel, however, will be surpassed by the Brooklyn,Tunnel as a motor route.

Manhattan and Brooklyn are separated by 5,600 feet of green water, the widest body traversed by any vehicular tunnel in the world, according to A. P. Armagnac. The Holland Tunnel spans 5,480 feet of open water; the Mersey, less than 4,000. The Mersey shaft, driven all the way through red

sandstone, never needed compressed air to keep the river out.

A 100-Million Dollar Project

The tunnel alone today is called a $76,000,000 project. This figure has risen from comparatively modest beginnings. The cost of the tunnel exclusive of the approaches, originally was estimated at $57,000,000. The cost of the approaches has increased from its original $23,000,000 to today's $40,000,000. These figures will hardly be the last word. Work was started in 1940, was suspended in 1942 because of the war and resumed in 1946.

Each of the two tubes will provide for two traffic lanes between the Battery at the lower tip of Manhattan and Brooklyn, and at their maximum depth the roadways will be 115 feet below mean high water. The tunnel will have an annual capacity of 15 to 16 million vehicles. It will be similar in appearance to the Queens Midtown Tunnel except that the lighting will be by means of continuous fluorescent tubes instead of incandescent lamps.

The work of driving the tunnel goes forward in an atmosphere of dankness and noise. Seven high-speed drills at the forward end of the tunnel are going full blast. They use high-pressure air of 80 pounds to the square inch and penetrate nine feet of rock in twelve minutes. "Holing through" ceremonies were held as the north and south portions of the tunnel were joined last September. The excavation job has to move some .540,000 cubic yards of earth and rock.

The tubes are cast iron lined, thirty-one feet in outside diameter, and are fourteen feet apart. They were shield driven under compressed air from Brooklyn, and in rock in free air from Manhattan, except for short sections near the Manhattan bulkhead line, which are in earth and rock and required the use of shields and compressed air for construction.

Walls and ceilings of the tubes are to be lined with ceramic tile, and the two-lane roadways in each tube will be paved with brick. The maximum incline will be a little under four per cent. Approximately thirteen hundred men are employed on the tunnel, and work goes on twenty-four hours a day six days a week.

Ventilation is Continuous

Because of the tunnel's great length, ventilation equipment will be needed at the center of the tunnel as well as at the terminals. As a base for the ventilation building, an artificial island of rock, clay and sand has been built off the eastern tip of Governors Island. The size of the ventilating plants that remove exhaust fumes, depends upon the cubic volume of space earmarked for motor vehicles. The ventilating system of the Brooklyn-Battery tunnel, delivering 4,200,000 cubic feet of fresh air every minute, has not its equal anywhere

INDIVIDUAL plates for the tunnel rings are jockeyed into place by a rotating mechanical arm, then bolted. At the top of the 23-ton iron circle, the fit of the final key plate tells, whether the sections have been properly set.

Weissner Studio Photos

in the world. A complete change of fresh air in the tunnel will be effected every minute and a half.

The spearhead of the construction is "the shield," a huge circle of solid iron. R. Wilcox describes the efficient manner of this huge tool. With the air compressed behind it, the shield drives into the river bed 32 inches at a time, moved by 28 hydraulic jacks. In the space thus cleared, an iron circle thirty-one inches wide is inserted. Each shove of the shield left room for an erector arm at its rear to assemble a new ring consisting of fourteen segments and a key section.

Each plate is bolted to the plate that touches it at the top and bottom and to the ones on either side. Every plate weighs a ton and a half. There are, of course, thousands of them in the two tubes. Not counting the bolts — that weigh ten pounds apiece—there are almost 125,000 tons of cast iron used in the tubes.

There is an immense difference between various kinds of material the shield driver encounters in building an underwater tunnel. As Armagnac points out, the kind of soft Hudson River silt that the builders of the Holland Tunnel struck, is the shield driver's paradise. All but one or two openings in the shield can be closed, it is shoved "blind," simply by main force, and the river bed comes out at the back like toothpaste from a tube. The advance in building the Lincoln Tunnel (also below the Hudson) was about as fast as iron could be erected behind the shield: 19 rings in twenty-four hours was the Lincoln Tunnel record.

But the East River bottom, encountered by the Brooklyn-Battery Tunnel, is a much more difficult problem. Men had to get out in front of the shield and dig, chip and blast out the mixture of soft stuff with boulders and sloping rock before it could move an inch. One or two rings a day was considered good progress for the Brooklyn tunnel when the going was tough. On good days a ring an hour can be done. That means 23 tons of cast iron laid in the muck or rock. The crew on the other side completes about the same distance in the same time.

Pressure and "Bends"

As in all underwater work, caisson disease or "the bends" plays an important part. It is caused by a sudden reduction of the atmospheric pressure at a rate which exceeds 2.0 or 2.5 to 1. Divers, builders of tunnels and bridges are liable to this occupational disease. Sometimes the pressure that holds the muck and water back, rises as high as 38 pounds to the square inch. Men can remain in it safely for only forty minutes at a time. Even then, many suffer from "bends" ranging from dizziness or slight pain in the finger joints, to complete paralysis of the limbs. The name "the bends" comes from the bellyaches, abdominal pain, that make the sick person bend over from severe pain.

Operations in compressed air are now generally carried out in such a manner that the workman who is returning to the normal atmospheric pressure passes through chambers which are graduated in their pressure. By the time he reaches normal atmosphere he has been gradually decompressed. The duration of the interrvals depend upon the extent of maximum pressure and the duration of exposure. Every tunnel worker at the Brooklyn tunnel wears a metal badge on his shirt: "Compressed Air Worker. If ill rush by ambulance to hospital lock located at 98 Hamilton Avenue, Brooklyn, N. Y."

One of the unpleasant symptoms of working in compressed air is connected with pressure changes in the middle ear. Armagnac tells that inhalation of a mixture of helium and oxygen gas has proven an excellent treatment for such cases at the Brooklyn Tunnel. The thinness of the helium gas, compared to ordinary air, enables it to penetrate the air passages and relieve the stoppage. The outfit was specified for the first time as standard equipment by the Brooklyn-Battery contracts.

FLOOR COVERING TRENDS

(From Page 9)

choice, asphalt tile second, cork tile third over any other flooring for working areas in banks.

Under-foot Comfort In Factories

Since the discovery that under-foot comfort directly improves the efficiency of workers, resilient flooring has come into wide use in manufacturing plants where it must withstand extraordinarily hard usage. Of the architects covered by the survey, a majority said they would install asphalt tile in industrial offices and drafting rooms in preference to any other flooring, with rubber and linoleum next. For light manufacturing areas, asphalt tile headed the list of smooth, resilient materials.

In restaurants and bars, asphalt tile, rubber and linoleum were chosen in that order from the smooth-surfaced resilient materials. For hotel corridors, lobbies and guest rooms asphalt tile was the choice. In theatre foyers, aisles and lounges choices were rubber, asphalt tile and cork tile.

For railroad coaches, pullman and dining cars rubber was first and asphalt tile second choice of the smooth, resilient floorings. The same ranking was true for elevators, stair treads and stair landings. Asphalt tile was top choice of the resilient materials in public washrooms.

Characteristics Governing Choice

Particularly significant in the survey is the fact that nearly five times the preference is shown for resilient flooring in tile than in any other form, because of the flexibility permitted by the tiles in

working out individual color and design effects. Flooring in this form also is easier and less costly to repair.

Low initial cost of asphalt tile appealed to 106 out of 157 architects answering that query, with moisture-resistance on or below grade second; and color and design possibilities third. Repairability, durability and low maintenance cost received high mention. Quietness under-foot was given as the top characteristic of cork tile, low first cost for linoleum, and color and design possibilities for rubber tile.

Plans for the Earthquake Engineering Research Institute

By JOHN A. BLUME, Engineer*

On April 2, the EARTHQUAKE ENGINEERING RESEARCH INSTITUTE was officially brought into existence as a nonprofit corporation for research in engineering seismology. Since the child EERI is still very young, even for an alphabetical agency, it might be said that at this time it has more plans than anything else. Altho these plans constitute the official subject of this paper, I would also like to include some of the story and reasons behind the creation of this Institute.

The work and findings of seismologists, engineers, building officials, and many others during the past decades has resulted in a greatly increased knowledge of earthquakes and of how to build structures to withstand the forces induced by earthquake motion. The building codes in many parts of the United States, Japan, and many other countries now contain regulations on the earthquake resistant design of buildings. These laws governing building construction vary from place to place, not only in the degree of resistance required, but also in many of the detailed requirements. It is proper that the law should vary according to the seismic history and the types of buildings of each country or geographical area.

However, when persons in the same locality who are constantly engaged in the design and regulation of building construction disagree not over details alone but over several major principles, and when these men are considered experts in the field, it can only mean (1) that they are dealing in a comparatively new and complex subject without the stability of established and accepted methods, and/or (2) that, because they may not look at a common problem with the same background data, they naturally arrive at different conclusions. Yes, we have come a long way and we know a great deal about dealing with earthquakes, but we have more to learn and all are not yet satisfied.

It is not my intention to say or even imply that great strides have not been made in the last quarter century in earthquake resistant design and construction. The Seattle shock is another illustration of that fact. Those individuals, organizations, societies and institutions that have made and are making important contributions toward our present state of knowledge are far too numerous for me to even mention in the time allotted to this paper. The Seismological Society of America has been a very great force in this progress. The point is (and this is perhaps one of the most important reasons for the founding of the Institute) that we must not rest upon the oars or sit back in complacency at this time because we have building regulations, some records of ground motion and building motion, and a temporary scarcity of mass disaster type earthquakes in densely populated areas. Instead, we should advance into a more intensive and more scientific research effort in order to evaluate what we think we know, what we have done, and, more important, what there is yet to do.

Most of those who have worked in this effort in its many phases, including seismology, mathematics, instrumental work, laboratory work, inspection of earthquake damage, in building code drafting, and in structural design, realize that there is no panacea. They also feel that waiting an indefinate number of years for destructive earth shocks in order to obtain more information and to confirm our methods is not only too slow for this scientific age but is also unfair to the public which owns, occupies, and walks by the buildings in our cities. Moreover, many feel that much has been learned in seismological research that has not been fully or effectively used or crystallized for the end result: the most economical design and construction of earthquake resistant buildings.

Thus the Earthquake Engineering Research Institute was initiated, by men interested in the

(See Page 17)

* Paper presented at the Annual Meeting of the Seismological Society of America, April 16, 1949.

A HOUSE
That Owners Helped to Design

MR. and MRS. JOHN W. SEIBERT
PASADENA, CALIFORNIA

ELMER GREY, Architect
FRANK COLE, Builder

THE OWNERS of this house are a young couple who for years lived in an artist's environment and imbibed something if its spirit. Those who live in such atmospheres sometimes do things and get away with them, that those of more humdrum tastes would hestitate to attempt—which accounts for some of the things about this house not strictly according to Hoyle.

The owners did not want a modern house with walls of glass where, during cold weather you had to go to a neighbors to get warm. Along with their architect they felt that many such houses ten years from now will be a drug on the market—and that ten years later still people may be asking in wonderment, "How come they used sheds for dwellings in those days?" They abhorred the crass

bareness of these modern concoctions and wanted their own home to be comfortable to live in and pleasing to look at.

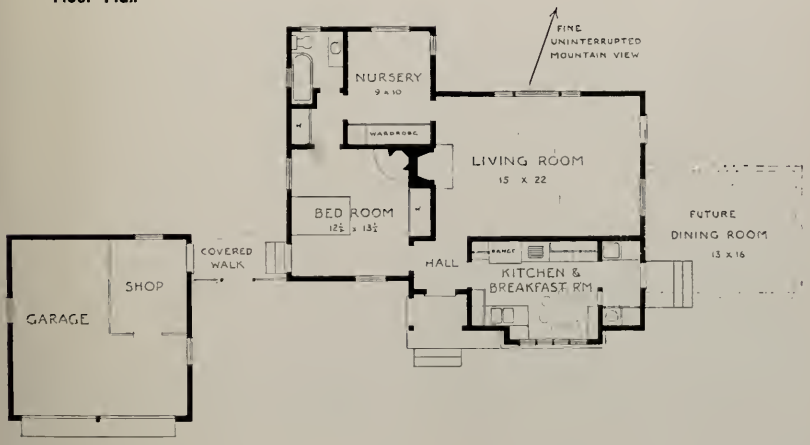
They liked the French Provincial style and hoped to have a suggestion of its charm incorporated in their design. Artist settlements are apt to be a little queer sometimes, and when an architect plans for those infected with their atmosphere he is supposed to be a restraining influence. But in this case he found that the urges of youth and enthusiasm were not all easily debunked. The location of the living room in the plan did threaten a cold war for awhile! But that difference completely subsided when by joint effort a plan was devised that placed the room so that their magnificent mountain view could be seen from it.

All joined heartily also in wanting such unheard of features as a corner fireplace all of brick in the bedroom and a living room mantel made up largely of the carved legs of an old table turned upside down!

The planning of the kitchen was also a joint affair. The days when housewives had maids would soon be a legend that grandmothers would tell to their children it was thought. A separate dining room had to be deferred for a later day. If the living room were to be used for that purpose

The Bedroom mantel
House for Mr. & Mrs. John W. Seibert
Pasadena, California

Floor Plan



Combination Kitchen and Dining Room

Sketches by Elmer Grey, Architect

it would mean endless walking back and forth from there to the kitchen. Why not design the kitchen so for the present it could be used as a dining room? One of the most popular restaurants in Pasadena broils its steaks so patrons can watch the spits go round as they sit at the tables. Why not the same here? So thus it was decided. Since the room was to be used for this double purpose its attractiveness was enhanced in various ways. The range was set upon a brick platform and backed against a brick wall, a brick barbecue built next to it, the two covered by a copper hood. A bay window was added facing the street, with leaded glass windows in it, to give more room for the dining table. The ceiling of the room was left open to the rafters and the floor was of flagstone.

They had their own ideas about the shingling of the roof. By whose authority do shingles have to be laid all in straight parallel lines? so the courses ceased to be courses at all but were laid very irregularly and doubled up in numerous places two, three and even four shingles thick—the effect being a rough texture somewhat reminiscent of thatch.

The wardrobe in the Nursery is planned with a thought for the baby's changing needs as she grows and grows and finally evolves into a young lady. The openings from the Nursery into the living room and toward the bedroom are Dutch doors so their tops can be left open and the baby can be heard if she needs attention.

The facing of the fireplace in the living room is of used brick surrounded by a row of beautiful Belgian figured tile. The tile are not yet in place, so the effect of the two in combination remains somewhat to be seen, but there is good-looking precedent for it. The ceiling beams in this room are not cased up but are real beams hand adzed.

The masonry foundation beneath the kitchen bay and adjoining porch and also the brick of the chimney are of used brick without struck joints, the mortar oozing from the joints being left intact. Chimney pots of burned terra cotta will surmount the chimney stack.

The covered passageway between the house and garage is for rainy days and serves to unite the two buildings in one architectural composition.

The owners are doing all their own painting—which accounts for attractive young women who live in artist's settlements wearing slacks!

Plans for the Earthquake Engineering Research Institute

(From Page 13)

subject, to "bridge the gap" between seismology and actual building design and construction; to provide a continuing, and it is hoped a permanent, institution with the organization, finances, personnel and facilities necessary to work diligently and effectively on any problem or problems the solution and investigation of which may lead to improvement in the economical design, construction, and location of structures of all types to resist forces induced by earth motion. The Institute is not intended to deal in pure seismology nor indulge in the preparation of building regulations or actual designs. Its function will lie between these two extremes, to act as a connecting link. It is intended to supplement, coordinate and to crystallize the findings of the existing institutions, societies and agencies and not to overlap their work in any respect. No miracles are expected by the planners, all of whom are men with sufficient diversified experience in the field to recognize the complexity of the problem and to realize that only a long term, well founded program can be successful.

Committee Formed

In 1947, the United States Coast and Geodetic Survey appointed certain individuals as Collaborators in their seismological program (at no salary) and helped them meet for the purpose of forming the Advisory Committee on Engineering Seismology. These individuals were confirmed by their various constituent organizations as delegates to this Committee. The Advisory Committee first met in San Francisco on September 5, 1947 with the following membership:

Bolles, John S., California Council of Architects; Davis, Prof. Harmer E., University of California; Engle, H. M., San Francisco Section, American Society of Civil Engineers; Fox, Col. Wm. J., Los Angeles County, Dept. of Building and Safety; Jacobsen, Lydik S., Stanford University; Housner, Dr. G. W., Structural Engineers Association of Southern Calif.; Little, John G., City and County of San Francisco; Martel, Prof. R. R., California Institute of Technology; Miller, Prof. A. L., Seattle Section, American Society of Civil Engineers; Morris, Samuel B., Los Angeles Section, Am. Society of Civil Engineers; Powers, Henry C., Structural Engineers Association of Northern Calif.; Willett, D. C., California State Division of Architecture; and Blume, John A., Structural Engineers Association of California.

Professor Jacobsen was elected Chairman, Col. Fox Vice Chairman, and the speaker Secretary. Subsequently, Mr. F. P. Ulrich was elected Treasurer. At a late date, Col. Fox found it necessary to resign because of other pressing duties. Professor Housner was then elected Vice Chairman and Mr. G. E. Morris, City of Las Angeles Department of Building and Safety, was made a member of the Committee to replace Col. Fox.

In 1948, the following men were also added to the Committee:

Byerly, Professor Perry, Seismological Society of America; Glover, Robert E., U. S. Bureau of Reclamation; Jakobsen, B. F., U. S. Army Engineers; and Perkins, Beauregard, Office of Naval Research.

The U. S. Coast and Geodetic Survey was unable to continue financial support for the Advisory Committee after the organizational meetings but it has been able to furnish the very great assistance of Mr. Ulrich and his Staff at San Francisco as needed from time to time. The Advisory Committee, by means of contributions of its own members as well as from some of the professional associations and societies, continued to function but as a unit completely independent of financial aid from the government or any other agency. It has functioned in an advisory capacity to the Seismological Division and has also taken the necessary steps toward the creation of the Earthquake Engineering Research Institute. Now that the Institute is on its own feet, it is expected that the Advisory Committee will continue in its advisory capacity to the Seismological Division and also to consider any other problems of a similar nature. Its membership is the same as before the founding of the Institute.

Institute Formed

It was decided at the initial meeting of the Advisory Committee that an Institute with its own personnel and facilities and without control by any agency would be necessary in order to materially further progress in engineering seismology and to help crystalize the vast amount of data gathered by the U. S. Coast and Geodetic Survey and others. Sub-committees were formed to investigate the possibilities and to develop ways and means of

(See Page 26)

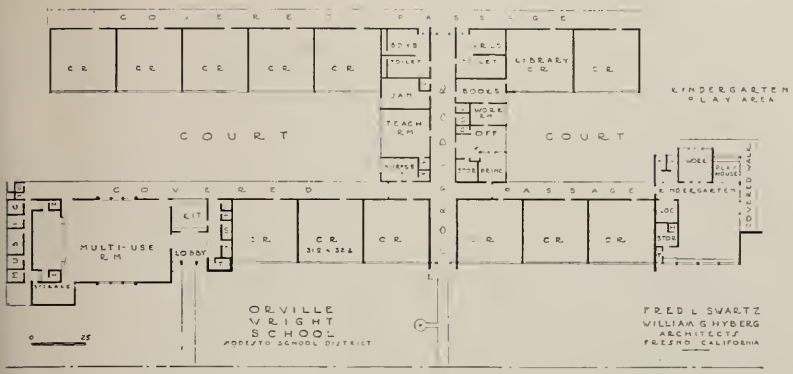
FRONT VIEW OF ORVILLE WRIGHT SCHOOL, Modesto, California

ORVILLE WRIGHT ELEMENTARY SCHOOL

MODESTO, CALIFORNIA

FRED L. SWARTZ
WILLIAM G. HYBERG
Architects

Baird Photos



The attractive, new, Orville Wright School recently completed in Modesto, California, is the first of a group of new elementary schools being planned for the city and which are soon to be constructed for the Modesto School District under a school expansion program which was submitted to and approved by the voters of the district. The proposed new school contruction project called for an immediate bond issue of $1,085,000.

Since approval of the program by the Modesto Board of Education and the passage of the bond issue by the voters some two years ago, the original amount of funds for the program has been substantially supplemented by a grant from the State of California under the Lowery Act, which provides a much needed State and Local method of cooperative financing for impoverished school districts.

KINDERGARTEN

Showing full utility use of all available space, as desired by teacher. Also adequate lighting.

ORVILLE WRIGHT SCHOOL . . .

Like many California cities the Modesto School District is far behind in its normal school construction and the continued growth of the community since the end of World War II has been so tremendous that is has been utterly impossible for the school district to finance solely and to complete construction of the much needed new school program now underway that is designed to provide adequate classroom and educational facilities for the greatly increased number of school children.

The full elementary school program of which the Orville Wright School is the first unit to be completed, calls for the construction of ten to twelve new elementary school buildings, with facilities for the handling of children in grades from the kindergarden to the sixth, plus two complete seventh and eighth grade school buildings.

The total cost of the program is estimated at approximately $4,000,000.

One of the first decisions, in making their plans of the overall new school program was the selection of the firm of Fred L. Swartz and William G. Hyberg of Fresno, to serve as the architects representing the Modesto Board of Education in the preparation of plans and the architectural supervision in the construction of the elementary school buildings. Included in the architects office and largely responsible for much of the detail in preparation of plans were the firm's staff of architects consisting of: William F. Baxter, James P. Lockett, James J. Nargis, Leonard L. Wash (licensed in Tennessee), and Byron C. Brodrick (currently completing State of California architectural examinations), the latter serving as an able job captain in the preparation of the Orville Wright School plans.

In planning the program and in the designing and construction of this first unit, the architects worked very closely with James H. Corson, Superintendant of the Modesto schools and his staff which included an educational advisory group of principals representing the various city elementary schools. The arrangement of the classrooms and

other utility facilities in the buildings has been developed by the architects in consultation with the school staff and the advisory group. Thus the location of classrooms, in relation to light, accessibility, and use is as practical and as convenient as possible.

Another problem confronting the architects and the Board of Education was that the Division of School Planning made a complete survey of the entire elementary school system in Modesto and reported a recommendation that a number of the older school buildings be replaced as quickly as possible as they were inadequate for continued use as school buildings. This means that practically the entire elementary school buildings throughout the district must be either rebuilt to meet present building standards or they must be replaced with entirely new structures.

After a considerable amount of study and consideration the general type of construction determined upon by the architects for all of the buildings will be similar. The buildings will be of a substantial frame construction on a concrete foundation; the floor will consist of concrete floor slabs placed on an earth fill covered with a suitable asphalt tile floor covering; a built-up composition roof covering will be provided and an acoustical tile ceiling in the rooms will assure a minimum of noise. The windows will be of steel sash, and for the ease and convenience of the children the classrooms will be equipped with cork tackboards and green colored chalkboards.

Each of the school buildings has been so oriented that the classrooms will all have a north light. The clerestory windows on the south wall will either be protected by venetian blinds on the inside of the room or by fixed louvers on the outside. Radiant panel floor heating has been adopted for the heating of all of the buildings.

The various classrooms have been individually painted with soft pastel colors and the classrooms thereby present a very cheerful appearance. The north wall of each classroom is a continual bank of steel sash which, together with the clerestory windows on the south, completely flood the classroom area with a natural light and without a glare which would seriously interfere with the studies and work of the pupils.

JAMES ALAN DALEY & J. WELLS HASTINGS, Architects

Oak Hill Road
RESIDENCE
For W. B. Roland
OAKLAND, CALIFORNIA

Situated on a large lot that rolls away from the road, in a setting of live oak trees, the rambling home of the W. B. Rolands overlooks the Sequoia Golf Course in Oakland, California.

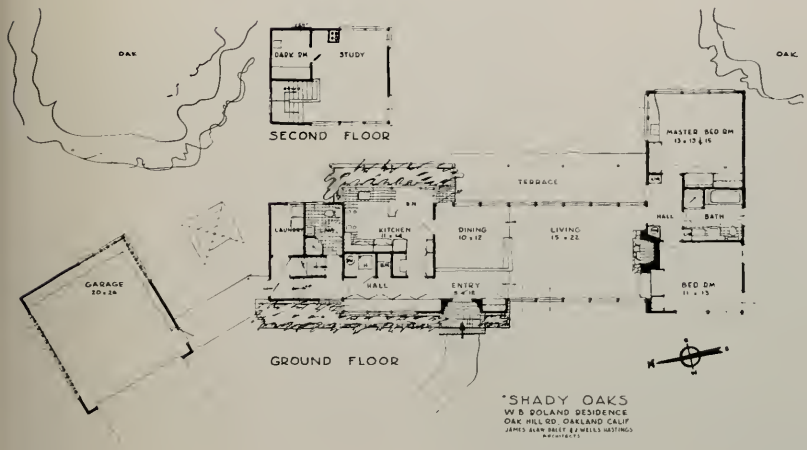
To get a view that extends beyond the immediate neighboring trees and hills, one has to go to the "top-side" to the study or "Sky Room", which is sufficiently high to overlook more hills and the vast San Francisco Bay beyond.

The home can be entered by the front door, going into the dining area and living room, or from the covered walk leading from the garage to the side entrance. The hall between the side and front entries is lighted by strip windows which have been placed over a storage wall. The laundry room, kitchen, powder room, and study are all adjacent to the secondary entrance. The lavatory on this side of the house serves as a wash-up space for the owner after his having worked in the shop part of the garage, or as a guest facility when the "Sky Room" is being used for guests.

The owner was an Army Air Force officer during the late war and consequently the "Sky Room" is decorated with pictures and models of airplanes.

FRONT ENTRANCE
High living room windows on this side, for living privacy and protection from western sun.

Large windows in bedroom at right are not objectionable as room is not in use in late afternoon, and is far enough away from the front door to assure privacy.

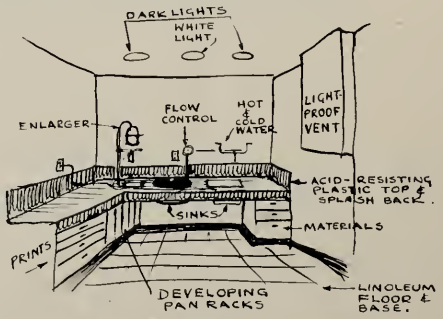


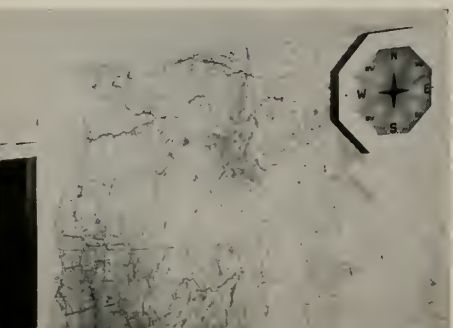
LIVING ROOM

Fireplace is made of Carmel stone with built in radio and phonograph cabinet at the right extending to the West windaw over which a continuous light cove has been provided. Walls are of Walnut veneer while ceilings are of fiberboard tile.

HOBBY ROOM

Is a well designed photographic dark room which provides for developig and printing of pictures.





Aircraft flight chart map of the United States is used as a wall decoration in the Sky Room. Ceiling and other walls are finished in light blue stained plywood.

The walls and ceilings are of light blue striated plywood, except for one wall which is covered with a large aircraft map of the United States. The second story windows are of heat resisting glass.

Being interested in photography the owner built a dark room off the study which is fully equipped and has a light proof vent in place of a window for air circulation. Water temperature and the flow for washing photographic prints is controlled by a simple system which was designed by the owner who is a master plumber.

Dining space is provided for in the kitchen and the main dining area is separated from the entry and living room proper by a low wall, which is high enough to shut the table off from view, yet leaves the ceiling clear for the better light and a pleasant feeling of room spaciousness.

The living room is six inches lower than the dining room space and entrance and is separated by a step.

A light cover over the living and dining room windows forms the curtain valance at the same time.

Direct access to the terrace is from both the dining room and the bed room hall. To keep hot water use to a minimum, two small heaters were used in place of one larger one.

The bedrooms have ceiling height wardrobe closets with built in drawers. The master bedroom has a built-in dressing table under the north window, and next to the fireplace in the living room there is a built-in wood box, radio and phonograph.

The kitchen is equipped with disposal sink, automatic dishwasher, and two 24-inch four burner ranges with a meat cutting block placed between them, while the work counters have a linoleum top with chrome edge and the window sill is of tile.

Kitchen wall cabinets have glass doors. Simple storage is provided for home canned fruits and vegetables.

The bedroom and living room walls are papered, while the living room and entry walls are of bleached walnut veneer plywood.

Brick planting boxes and brick steps add color to the front and rear. A grape stake fence along the west side of the covered walk between house and garage forms an enclosed patio at the side of the house where a barbecue pit will be installed in the future.

The drying yard has been moved to the back of the garage.

A hand split shake roof and stone chimney give texture and a rural character to the home.

THE KITCHEN . . "disc" and pipe behind right hand stove, separated from other stove by cutting block, is required by local building code. The case in the upper right hand corner hangs from the ceiling and divides the breakfast nook from the working area of the kitchen. It stops a foot short of the continuous band of windows and is accessible from both sides.

Plans for the Earthquake Engineering Research Institute

(From Page 17)

creating such an Institute. On April 2nd, 1949, the Institute held its first meeting, adopted its by-laws, elected its officers, and officially started its existence, The initial membership will consist of all members of the Advisory Committee who can and are able to join the Institute and also Mr. Ulrich. The 7-man Board of Directors elected were the following: Bolles, Housner, Jacobsen, S. B. Morris, Ulrich, Willett, and the speaker. The officers elected are: Lydik S. Jacobsen, President; George W. Housner, vice President; Franklin P. Ulrich, Treasurer; and John A. Blume, Secretary.

The by-laws grant the Board of Directors sufficient authority to conduct the affairs of the Institute but certain functions are to be acted upon by the regular membership. In order to provide a balance at all times between those involved in the various phases of the earthuake problem, the Board membership of 7 is limited to a maximum of 3 members who are principally engaged in any one of the following pursuits: Teaching and Research, Professional Practice, Governmental Regulation of Structures and their Design.

The immediate plans for the Institute include the obtaining of recognition, initial funds, a Director, some personnel, research contracts, subscriptions, and grants. In addition and concurrently, memberships of Honorary, Institutional, and Subscribing classes will be granted to interested and qualified persons or organizations. These steps will naturally take some time, especially until salaried personnel can take over the work from the non-salaried and otherwise occupied Institute members. In no case, however, is quality to be sacrificed—the builders, looking to a long useful life, are planning a secure foundation.

Ultimate plans include an institutional building with complete laboratory facilities, library, instruments, staff, and everything necessary to carry on a complete research program. Naturally this will take some time to aquire and no doubt, the Institute will have to first prove it can stand before it is permitted to walk. Pending the construction of its own facilities, the Institute will work in conjunction with existing agencies, laboratories, and institutions.

The policies will of course be based upon a scientific approach, taking nothing for granted, investigating thoroly and without prejudice, and disseminating findings for the public welfare. Altho contracts, grants, and subscriptions will be required, the Institute will maintain its independent status without obligation except to ascertain the truth.

Activities Include

What type of problems or questions will the Institute consider? I hesitate to answer that question since no one really knows at this time. However I will venture a few that I have considered from time to time:

1) Should all structures be designed for assumed static lateral forces based upon acceleration, or are there other more logical and perhaps just as workable approaches to the problem?

2) Is resonance to be dismissed as a consideration in the design of buildings of all types?

3) What is the relationship of the softness of the ground to building damage from earthquakes where all other conditions are equal or have been taken into full consideration?

4) How should the overturning (cantilever) moment be treated in high narrow buildings or units thereof such as sheer walls which act structurally for many stories?

5) What is the damping in buildings of various types and under various amplitudes?

6) How should we differentiate between a rigid and a flexible structure?

7) Is it possible that in some cases the rigidity occasioned by a lateral design for a high percentage of gravity might induce greater forces and more resultant earthquake damage than design for lesser assumed forces with more resulting flexibility of structural action?

8) Is the usual allowance of one-third increase in design unit stress under earthquake forces rational for all materials and members?

9) What constitutes an effective floor or roof diaphragm for various classes of framing and construction?

10) Is not the ration of strength to rigidity of materials and construction methods a more logical index of earthquake resistance than strength alone?

These are some examples of problems. There are many more, of course. Many of us have our ideas about the answers but are we all in agreement and are we certain? Some of these questions may be too complex to approach directly or in one step, but that is no reason to ignore them. In any event, with billions of dollars for construction (as well as for other purposes) there should be sufficient motive to invest thousands, even hundreds of thousands, in time, to determine the truth about the complex problem of earthquake resistance beyond any doubt.

The Earthquake Engineering Research Institute, will need time, help, and nourishment to get on its feet. Your suggestions and support will be appreciated, not only by its present officers, directors, and members, but, we firmly believe, by the generations to come.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Brady, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

WASHINGTON STATE CHAPTER

Recent indications point the value of the Small House Plans Bureau as the program, while not perfect, is a definate service to the public. House plans should be limited to those low in cost, and an effort made to provide site analysis and limited building supervision. The committee also urged a closer tie-in with the A. I. A. in the Bureau program.

* * *

Alfred H. Ludin, attorney, clarified and explained the recent decision on the Maloney Case. The decision, as made by the court, makes it possible for an architect on a public job to lose his fee if the cost of the building exceeds the appropriated funds.

* * *

Perry B. Johanson was a recent speaker at the Pacific Northwest Academy of Arts, his subject being "Architecture".

* * *

The Washington State Chapter A.I.A. Bowling League closed its 1948-49 season, with Stuart & Durham winning the team trophy. Members of the team are: Dick Parker, Bob Conrad, Bruce Carey, Bill Gartside, and Arnie Gangnes. Winner of high single game award was Dick Parker, and winner of the high three game series was Fran Huggard. George W. Stoddard & Associates won the team high single game.

Sam Hammack was elected president for the ensuing year, with Arnie Gangnes, secretary. The league voted to continue the games next year.

* * *

NEW MEMBERS: New members of the Chapter include George W. Hazen and Richard E. Lytel, Corporate Members; G. Stacy Bennett, David W. Dykeman, Jr., Arthur A. Graves, Melvin J. Larson, and Samuel G. Morrison, Associates. Junior Associates include Alan C. Liddle and Robert S. Burns. Student Associates, Herbert J. Bittman, Douglas L. Cuykendall, James W. Hall, Jack E. Woodman, Chester L. Brown and Charles G. Bartell.

NORTHERN CALIFORNIA CHAPTER

California took the two top awards and several merit awards for distinguished design in the American Institute of Architects first National Honor Award Program.

Frederick L. Langhorst received first award for his designing the Marin county home of Dr. Alex Kerr of San Francisco, while Marsh, Smith & Powell of Los Angeles took first in schools. Other Chapter members winning Merit Awards were: John Lyon Reid for design of Fairfax Elementary School; Wurster, Bernardi & Emmons for a house in Carmel; Francis Lloyd for a week-end house in Carmel; and Mario Corbett for a home in Sausalito.

* * *

The May meeting was a joint meeting of the Chapter and the San Francisco Women's Architectural League who have been doing an outstanding

job in stimulating public interest in the practice of architecture.

* * *

Tentative plans have been announced by the San Francisco Museum of Art to hold a Bay Area architectural exhibit early in the autumn. Chapter members Gardner Dailey, Bolton White, Clarence Mayhew, Ernest Born, George Downs, and Robert Kitchen will cooperate with Richard Freeman and Robert Church of the Museum in preparing the exhibit.

* * *

A number of architectural students are seeking summer vacation employment. If you have an opening for one of these youngsters, communicate with Chapter headquarters.

* * *

Jim Bernard, Chairman of the Junior Associate Committee reports the program of his committee to acquaint draftsmen and students with problems and activities of the Chapter is progressing very satisfactorily.

* * *

SCHOOL FEES: While an 8% fee has been recognized throughout California as the recommended minimum architectural fee for school design, the first of the larger San Francisco school projects were accepted at a 7% fee basis. In order to alleviate any misunderstandings, however, a hearing with San Francisco officials has been requested.

* * *

NEW MEMBERS: New members include Hons V. Gerson, Curham J. Harkness, Rose E. Luis, Donald S. Macky, Herbert T. Seipel, Richard E. Audsley, Otto G. Hintermann, Albert W. Kahl, Lisle T. Richards, Charles Salyers, R. P. Tobin, Michael A. Gallis, Jack P. Hermann, Earl R. McDonald, Mogens Mogensen, and John V. Vandenburgh, Jr., Corporate Members, and Junior Associate's Norbourne L. Shrader, John H. Easterly, Robert C. Ellenwood, Robert S. Biddle, Haward A. Friedma, and George E. Kostritsky.

SOUTHERN CALIFORNIA CHAPTER

Architects and engineers of the Mutual Housing Association, Whitney Smith, A. Quincy Jones, Edgardo Contini, and Robert Graves, manager, recently presented a detailed picture of the Brentwood Project which comprises 835 acres of land and will provide home sites for 500 families when completed.

Models and photographs were displayed, as were slides on the "Pilot House." The project is the largest of its kind in the nation.

* * *

Richard Neutra reported his observations and impressions of Europe after spending seven weeks visiting England, France, Italy, Netherlands, Switzerland, Norway, Denmark, Sweden, and Finland.

The architects of the San Fernando Valley have prepared and are exhibiting drawings of homes. Popularity of various designs is to be determined by public approval.

* * *

A special exhibit is being prepared for showing at the Pasadena Art Institute in cooperation with the Pasadena Chapter. Arrangements are under the direction of Frank Gruys.

* * *

NEW MEMBERS: Membership in the Chapter has been increased by new Institute Members, Robert N. Eddy, William H. Hillier, Niels C. Sorenson, Roscoe L. Wood, Robert J. Mayer, Yan F. Carr, Schwen W. Ma, and Barry Frost. Associate Member Glen C. Bush.

SAN FRANCISCO WOMEN'S ARCHITECTURAL LEAGUE

As the first project of their Centennial Year Program, the San Francisco Chapter of the Women's Architectural League recently conducted a historical review of architecture covering six homes which were considered significant examples of residential styling in San Francisco during the past 100 years.

The homes included the Nixon property, 944 Chestnut Street, considered one of the older San Francisco homes built by a French architect in 1857 and strongly exemplifying the Renaissance period. The English Tudor home of Mr. and Mrs. Frederick Whitman; the Roos' home on Jackson Street; the Michael Brown home on Russian Hill; the Telegraph Hill home of the Smith Willd's; and the three-story Town House on Russian Hill for Mr. and Mrs. Walter P. Busher.

The tour program was under the supervision of Mrs. Donald Beach Kirby.

ARCHITECTS TO STUDY SCHOOLS

The nation's architects will take a critical look at schools and school building problems as a result of a statement of policy adopted by the A.I.A., under which architects will share the benefits of new techniques and designs and endeavor to establish adequate codes and standards.

The program to undertake overall studies of school building problems is the outcome of a report of the Institute's Committee on School Buildings, which recommends that architects take an active part, not only in planning buildings, but also in the study of long range school building programs, the strategy and tactics of a multi-building program and the programming of the physical facilities necessary to meet educational requirements.

Serving on the Committee on School Buildings are: Chairman, Ernest J. Kump of San Francisco; A. Thomas Brown of Tucson, Ariz.; William Wayne

Caudill of College Station, Tex.; Lawrence B. Perkins of Chicago; Howard Dwight Smith of Columbus, Ohio; John W. McLeod of Washington, D. C.; and Philip Will, Jr. of Chicago, an alternate. Walter A. Taylor of Washington is Director of The Institute's Department of Education and Research.

ARCHITECT GIVEN HONOR

Ludwig Mies van der Rohe, head of the department of architecture at the Illinois Institute of Technology, has been elected to honorary corresponding membership in the Royal Institute of British Architects.

In addition to his academic work, Mies van der Rohe conceived and designed the 100 acre Illinois Tech campus now under construction in Chicago.

MORE CALIFORNIA CONSTRUCTION PROJECTS AWARDED ARCHITECTS

Notified by the State Personnel Board that it is unable to furnish the required professional type of help necessary to meet architectural requirements for a number of urgent building projects, Director of Public Works C. H. Purcell has announced the selection of a second group of private architects to prepare plans for the following state building projects:

Factory Trades Building for Training Center for Adult Blind, Oakland—Corlett and Anderson, Oakland. Branch Office Building for Department of Employment, Stockton—Peter Louis Sala, Stockton. Branch Office Building for Department of Employment, Bakersfield—Wright, Metcalf and Parsons, Bakersfield. Branch Office Building for Department of Employment, Hollywood—A. C. Zimmerman, Los Angeles. Branch Office Building for Department of Employment, Long Beach—Kenneth S. Wing, Long Beach. Branch Office Building, Department of Employment, Riverside—G. Stanley Wilson, Riverside.

For Division of Beaches and Parks: Concession Building, Doheny State Park—Daniel, Mann and Johnson, Los Angeles. Recreation Building, Castle Crag State Park and Completion of Museum Mt. Diablo State Park—Confer and Willis, Oakland. Museum Structure with living quarters, Donner Monument—Pollack and Pope, San Francisco. Lodge and Cabins, Calaveras State Park, Harry J. Devine, Sacramento.

UNIVERSITY OF WASHINGTON SCHOOL OF ARCHITECTURE

Groundwork for one of the most unusual student design problems in the nation, the layout of a theoretical super shopping center on Mercer Island, is underway at the University of Washington School of Architecture.

Members of the sophomore, junior and senior

WHEN PRICE IS THE FACTOR...
...USE ECONOMY!
"PRICE?" You'll answer that more and more often now. With the ECONOMY you can sell low price, high quality and fast recovery.
The ECONOMY is only one of a complete line.
Write for illustrated, detailed catalog.
Continental WATER HEATER CO.
1801 Pasadena Avenue • Los Angeles 31, California
A subsidiary of National Steel Construction Co. with plants at LOS ANGELES • SEATTLE • LOGANSPORT
All models are approved by A. G. A. for LP, Natural and Manufactured Gases

classes representing more than 150 architectural students, will participate in the coordinated program which is under the direction of Prof. Arthur P. Herrman, director of the school.

Objective of the problem is to demonstrate the need for cooperation between different talents and personalities, and the advantage of teamwork in the practice of architecture.

The project will be completed in June.

Aiding on the project will be Edgar Herzog, planning officer of the King County Planning Commission; John D. Spaeth, Jr., director of planning, City of Seattle, and Joshua H. Vogel, planning and public works consultant, University of Washington Bureau of Governmental Research and Services.

TEXAS WOMAN AWARDED ARCHITECT SCHOLARSHIP

For the first time in the thirty seven year history of its annual competition, the New York Chapter of the A. I. A. awarded the 1949 LeBrun Traveling Scholarship of $2800 to a woman, Miss Agatha Turner of Lubbock, Texas.

The award was based upon the best entry of drawings for a suburban department store building, and each submission was examined for the following qualificatione: land use, traffic control, spatial organization, structure and materials character.

Miss Turner's submission was awarded the scholarship for its brilliant answer to the basic requirements of the problem, according to Harvey Stevenson, Chairman of the Jury of the Committee on the LeBrun Scholarship.

Honorable mention went to Gordon F. Anderson of Watertown, Mass., and Temple E. Kirkpatrick of New York.

A.I.A. SUPPORTS H.R. 4009

Louis Justement of Washington, D. C., has reaffirmed the support of the A.I.A. behind the Housing Act of 1949, commonly known as H.R. 4009, provided several rather important amendments are made to the bill.

Suggestions for amendment include such subjects as urban development, slum clearance, relocation of families, and planning and control design of projects.

Recommendations have been submitted to the House Banking and Currency Committee.

ARCHITECTS HOLD OPEN HOUSE

The architectural firm of Wurdeman & Becket, Los Angeles, celebrated their 15th year in business on May 1st by moving into a new five story building at 5657 Wilshire Boulevard.

The architects' new offices, which occupy the entire top floor, have been executed according to their celebrated practice of "total design," with not only the building itself, but every detail of interior furnishings and decor, conceived on Wurdeman and Becket drafting boards. The colors of the walls, and weave of the carpets and draperies, the shape of virtually every desk and chair have all been carefully contrived to provide a completely functional workshop for the architects and their staff of sixty artists, draftsmen, engineers and other highly trained specialists.

The 5657 Wilshire Boulevard Building is the fifth major project of the architects to be erected on Wilshire Boulevard. As well as the spectacular Prudential and General Petroleum Buildings, Wurdeman and Becket also designed the famous postwar model home at Highland, which has already attracted more than a million visitors, and Tilford's restaurant at La Brea, which won the honor award of the American Institute of Architects several years ago. A few blocks directly north of the new building, moreover, is the Pan Pacific Auditorium and theatre which, designed by Wurman and Becket in 1934, first established them among the foremost architects in the country.

Recognized Everywhere!
IT'S HAWS FOR HIGHEST QUALITY
• Best Materials
• Finest Workmanship
• Trouble-free Valves and Fittings
• Complete Sanitation
Write today for '49 HAWS Catalog.
Specify HAWS—and be sure!
HAWS SANITARY DRINKING FOUNTAINS
ELECTRIC WATER COOLERS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

SENIOR & JUNIOR HIGH

The San ose Board of Education has awarded a contract to Williams & Burrows & Carl N. Swenson Company of San Jose, for the construction of a $1,867,000 new Senior and Junior High School Building for the Willow Glen District.

Marsh, Smith & Powell of Los Angeles, are the architects.

STANFORD ADDITION

A contract has been awarded to Wagner & Martinez of San Francisco, for the construction of a $24,000 addition to the Minning Building at Stanford University in Palo Alto.

The building will be of frame and stucco construction with concrete floors.

Eldridge T. Spencer and Wm. C. Ambrose, San Francisco, are the architects.

ARCHITECT SELECTED

Chas. F. Strothoff, San Francisco architect, has been selected to design a new Bank Building in Redwood City for the American Trust Company.

SCHOOL BONDS VOTED: Electors of the Walnut Creek Elementary School District (Contra Costa County) have approved a bond issue of $89,000 for the construction of a new Grammar School.

APPOINTED PERSONNEL MANAGER OF FULLER CO.

David C. Patrick, who until recently has been serving as special assistant to the President of the W. P. Fuller & Company, has been named Personnel Manager, according to a recent announcement by A. H. Brawner, President.

Patrick has been with the pioneer paint, glass, and wall paper firm for the past 12 years, and has served previously as manager of the Company's Technical Service Department.

DISSOLVE PARTNERSHIP

The partnership of Roselyn & Gartner, architects, San Francisco, has been recently dissolved, with the work of the firm being taken over by Lloyd Gartner, A. I. A.

Offices for the practice of architecture will be maintained by Gartner at 821 Market Street, San Francisco.

ARCHITECT MOVES

Joseph Allen Stein, Architect, has moved his offices from 121 Beale Street, San Francisco, to 45 Maiden Lane, same city, according to a recent announcement.

DETROIT STEEL ELECTS

Directors of Detroit Steel Products Company, recently announced the following election of officers:

H. F. Wardwell, former president of the company advanced to Chairman of the Board; W. C. Owen was named President; and William Gillett and E. C. Hodges were elected vice presidents.

Officers continuing in their positions are H. D. Palmer, vice president; R. W. Weed, vice president; R. S. Van Cleve, vice president; E. R. Ailes, secretary treasurer; H. A. Pope, assistant secretary; and C. G. Bunting, assistant treasurer.

LANDSCAPE ARCHITECTS MOVE

The firm of Eckbo, Royston & Williams, Landscape Architects, have moved their offices in San Francisco to 555 Clay Street, according to a recent announcement.

PRODUCERS COUNCIL TABLE TOP EXHIBIT

Designed to acquaint architects and the building industry with postwar products and improvements in existing building materials and products, the Producers Council of San Francisco is holding a "Table Top Exhibit" at the St. Francis Hotel Colonial Room on May 25 and 26th.

Don Lyon, President of the San Francisco Chapter of the Producers Council, points out that this is the first exhibit of its kind since the war and is "programmed for the building industry and architects throughout northern California".

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Steve Barnes, President; Harry W. Bolin, Vice President; Lewis K. Osborn, Sec-Treas. DIRECTORS, Richard W. Ware, Geo. E. Brandow, L. T. Evans, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

STRUCTURAL ENGINEERS ASSOCIATION OF THE STATE OF CALIFORNIA

Delegates to the Structural Engineers Association of California met recently in San Francisco to elect officers for first year under the new constitution and to conduct other business including the selection of committee personnel.

The Officers elected were: John A. Blume, San Francisco, President; Ernest D. Francis, Sacramento, Vice-President; and John E. Rinne, San Francisco, Secretary-Treasurer.

Other delegates constituting the Board of Directors together with the Officers are: Arthur A. Saur of Sacramento; S. B. Barnes, George E. Brandow, Murray Erick, all of Los Angeles; Richard W. Ware of Pasadena; and Mark Falk, of San Francisco.

Besides the Officers and Delegates constituting the Board, standing Committees of the State Association consist of the Legislative Coordination Committee, Malk Falk, Chairman; Code Committee, Harold King, Chairman; Public Relations Committee, H. C. Powers, Chairman; and the Covention Committee, J. W. Herron, General Chairman.

The Constitution of the State Association which was completely revised last year provides that its Directors arrange and conduct the Annual Convention, as well as other matters common to all constituent Structural Engineers Associations in the State.

During the past years, the arrangement for the Convention has been delegated to one of the Member Associations. While the conventions have been uniformly successful, it is expected that the recently established procedure of delegating the Convention to a committee of the State Association and with all Member Associations participating, would make for a more successful Convention.

The 1949 Convention will be held at the Ahwanee, Yosemite Valley, on October 13, 14, and 15th. Preparations are already under way to make this year's Convention the best in technical sessions and social events, and with the largest attendance.

EAST BAY STRUCTURAL ENGINEERS SOCIETY

At a recent meeting held in the Leamington Hotel, William H. Popert, of the American Institute of Steel Construction, presented an interesting exhibit of prize winning steel bridge pictures.

Elected to membership were: Marcus Carlson, and George H. Jennings.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

A interesting illustrated talk on "Tilt-up" concrete wall construction was recently presented by Sam

PREVENT FIRES and EXPLOSIONS
Caused by EARTHQUAKES!

Plus a Manual Control For Other Emergencies!

SAFETY ENGINEERS and scientists say the Sentinel is the most accurate and dependable earthquake actuated shut-off valve in the world!* On the job 24 hours a day! A record of more than 10 years of reliable service . . . ***proven*** during a period which included two major seismic disturbances. * Names on request

Indispensable in live seismic regions.
•
Recommended for use with Liquified Petroleum Gases.
•
Thousands installed in the United States.
•
List of installations available on request.
•
Available at leading wholesale plumbing establishments.
•
Indorsed by National Bd. of Fire Underwriters.
•
Leading Fire Prevention Engineers Approve.

Take No Chances . . . Install The
SENTINEL
AUTOMATIC GAS SHUT-OFF VALVE

Designed to shut off automatically when there's an earth shock or explosion sufficient to damage buildings or pipe lines. Listed by the Underwriters' Laboratories and specified by leading architects and engineers for installation in schools, fire stations, factories, theaters, churches, stores, municipal, military and utility buildings. A. I. A. File No. 29-F-6
Write for illustrated folder.

SECURITY VALVE CO.
410 San Fernando Rd., Los Angeles 31, California
Phone CApitol 6191

Hobbs, in which many phases of the uses of this type of construction was discussed. R. S. Chew, consulting engineer, San Francisco, also spoke on "Seismic Design".

* * *

Something new and different was presented at a recent meeting by W. C. Tayloe.

Following three programs of highly technical subjects in the early meetings of the year, the engineers relaxed and enjoyed a talk on "Model Railroading" followed by an exhibit of some very fine models. Mr. W. C. Tayloe is Manager of the Vermont and Hollywood Branch of the Security First National Bank of Los Angeles, but away from the bank, and at home, he is an ardent railroader. He has been following this hobby for many years and presented a very interesting program.

* * *

CODE COMMITTEE

The Code Committee as appointed by Harry W. Bolin, President, has outlined an extremely heavy program for the coming months. Harold P. King, Consulting Engineer and last year's Chairman of the committee, has been reappointed to carry on the work. Under Mr. King's able guidance and control, the Code Committee of 1948 made great steps towards the accomplishment of unity in all Codes effecting the construction industry. There is still a great amount of work to be done along this line.

Mr. King has outlined in his agenda some fourteen or fifteen major items to be considered. Some of these are expected to be ready to submit to the Los Angeles Board of Building and Safety by June 1st so as to be incorporated in next year's Code. Among these suggestions will be that of changing roof live loads to comply with those now in effect in the Uniform Code and the Los Angeles County Code. This particular phase of the Code was instigated by the committee last year and carried through to a successful conclusion at the fall convention of the Pacific Coast Building Officials Conference at Sacramento.

Another subject that has gained the attention of Structural Engineers for many years has been the study of floor live loads for design in multi-story buildings in various occupancies. An attempt has been made to obtain a formula, or table or chart, that may permit a designer to choose realistic loading factors for design. Safety is paramount of course but economy is also a must. Heavy live load requirements increase dead loads which in turn may add to the seismic hazard which again may add to the cost of the structure. This problem has long vexed the engineer. This Code Committee hopes to come up with a reasonable solution that will at least simplify the problem and obtain conformity in design requirements under all the codes in California.

Other subjects under consideration by the committee include the study of the new recommendations by the American Concrete Institute and the American Institute of Steel Construction. Masonry construction, including brick and concrete block, also has a prominent place on the agenda for changes considered necessary by contractors and building inspectors, as well as engineers and architects.

Because of the broad program ahead, a large committee has been appointed, consisting of twelve members and five advisory members. The new members are made up of consulting structural engineers and engineer members of various building departments. The advisory members represent the various groups of the construction industry. An exception to this is the appointment of Mr. Rolland Cravens as an advisory member. Mr. Cravens is technical advisor to the Pacific Building Officials Conference and in this capacity is very close to the problems of the code enforcement agencies.

The Code Committee of the S.E.A. of Southern California has taken its place in local construction circles as a coordinating agency between the building department and the building public. Recommendations from this group are almost mandatory in some instances before major changes are acceptable. The group is very jealous of its reputation

(See Page 35)

"ECON-O-MATIC" . . . is the automatic Stanley Door Hardware Set that makes lightweight plywood doors 100% practical for garages. Designed for doors weighing up to 150 lbs. Cost little more than old-style hardware. For smart appearance — faultless action — long service — specify Stanley.

The Stanley Works, New Britain, Conn.

*Copyrighted

STANLEY

Reg. U.S. Pat. Off.

Simple to Install
Requires Only 2¼-in. headroom

HARDWARE · HAND TOOLS · ELECTRIC TOOLS

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Galitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. MacJennett, Mueller Brass Company, 475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

The April meeting of the San Francisco Chapter was held Monday, April 4th, in the Palace Hotel. The meeting was conducted by Mr. Henry J. Schwein, Western Manager of the Gypsum Association, and featured color films covering the process and uses of Gypsum materials. The presentation was very much enjoyed by the members, and our architect friends as well.

COMING EVENTS

"Quality — Dependability — Responsibility" — these words speak the theme of the Table Top meetings scheduled for May 24 and 25. The place, St. Francis Hotel, Colonial Room, starting with a luncheon at 12:30 on May 24. All architects of the Bay Area are invited as guests of the Council to this luncheon. Immediately following, the exhibits will be opened for inspection. On display will be found the materials each Council member has chosen to bring to the attention of the building industry. All exhibits will reflect the theme of the meeting. Space is allotted for display by the architects of models and pictures for their most recent work. Closing time for this first day is 7:30 p.m. On May 25 the exhibit will be open from 9:00 a.m. until 3:00 p.m. for accommodation of invited guests of affiliated industries. A large attendance is expected. Keep in touch with the Council Table Top Committee.

NATIONAL COUNCIL NEWS

Richard J. Canavan, architectural engineer, has been appointed technical secretary to the Producers' Council, Inc., Charles M. Mortensen, the Council's executive secretary, has announced.

Canavan, who is a graduate of Iowa State College, formerly was district manager in Atlanta for the Ingersoll Utility Division of the Borg Warner Corp.

In his new position, he will aid the development of the Council's technical program, with special emphasis on promotion of modular coordination, development of a film library for architectural students, and encouragement of building code modernization.

Canavan served for two years with the Navy Seabees during World War II.

USE QUALITY PRODUCTS — THE PRODUCERS' COUNCIL, MANUFACTURERS OF BUILDING PRODUCTS — CONSULT AN ARCHITECT

WITH THE ENGINEERS

(From Page 33)

and is working very hard to make this work come up to the standards of the past. Members of the Committee are: BUILDING CODE: Chairman, Harold P. King; Vice Chairman, John Case; F. M. Andruss; Fred Alexander; S. B. Barnes; Roy G. Johnston; Ernest Maag; John Manning; Carl Nelson; J. N. Sparling; Hanley A. Wayne; Hal Colling. ADVISORY MEMBERS: Ben Benioff; R. W. Binder; Samuel Hobbs; Norman Kelch; Roland Cravens.

* * *

NEW MEMBERS. Thomas Griffiths and George F. Smith have become members; Melvin J. Skinner and Philip Helsey, Associate Members; and John T. Beals, Affiliate Member.

AMERICAN SOCIETY FOR METALS PUGET SOUND CHAPTER

The membership of the Puget Sound Chapter of the American Society for Metals was introduced recently to the newest methods used in steelmaking by Mr. J. S. Marsh, Research Engineer, Bethlehem Steel Company, Bethlehem, Pennsylvania, who spoke on "Modern Open Hearth and Electric Furnace Steelmaking."

Marsh told of the pressure put on the steelmakers during the war to increase production. This resulted in a research program to find ways and means of increasing capacity. In discussing this research he treated the chemistry of steelmaking in an interesting and most comprehensive manner.

The action between carbon and oxygen was referred to as the principle reaction, which if speeded up would increase output. He referred to the open hearth and electric furnaces simply as heat engineer by which the reaction is produced. It was pointed out that for each set of conditions there is an equilibrium point. If in the carbon-oxygen reaction there is an oxygen potential or driving force set up, the equilibrium is disturbed and the higher the potential, the faster the reaction. Experimental heats were made with oxygen bubbling through the molten metal which succeeded in speeding up reaction. In production the increased oxygen potential was supplied by bubbling air through the metal for reason of economy. He stated that until refractories which will stand up under 3500°F. are commercially and economically available the production of steels by a continuous process would not be practical. An interesting discussion followed.

* * *

INDUSTRIAL CONTROLLED ATMOSPHERE

Mr. Norbert K. Koebel, Director of Research for the Lindberg Engineering Company, presented at a recent meeting a very interesting and enlightening

(See Page 38)

COULD YOU DESIGN A BETTER PIG?

Probably not. Mother Nature does a pretty good job. And if one little pig misses his dinner because of insufficient outlets he'll be first in line next time.

Your job is to design and build better homes . . . homes with enough electric outlets properly located to feed the many appliances which have become the very heartbeat of modern living.

The Certified Adequate Wiring seal on a home guarantees convenient and efficient operation of all appliances. Outlets, switches, lights, circuits and wire-size are carefully planned.

Adequately-wired homes command premium resale prices. Banks recognize added equity in these homes. And your clients are thoroughly satisfied.

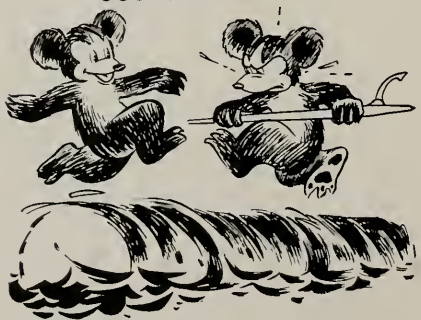
It's good business for you . . . now and in the future . . . to specify Certified Adequate Wiring. See your local utility for free help in planning wiring layouts.

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street San Francisco 3

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK
Specify it in your home
Available through Lumber Dealers
LOS ANGELES
601 W. 5th Street
Phone MIchigan 6294
SAN FRANCISCO
333 Montgomery Street
Phone DOuglas 2-3883
J.H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.

QUALITY building material
COSTS YOU LESS



E. K. WOOD LUMBER CO.
GENERAL OFFICES P. O. Box 1618, Oakland, Calif.
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

HEADLINE NEWS & VIEWS

By E. H. W.

"THE most important thing about the present business situation is the growing reluctance of consumers and business concerns to spend money";—Prof. Sumner H. Slichter, Harvard University.

* * *

THE last of February saw the seventh consecutive week when furnaces of the steel industry operated at 100 per cent of rated capacity or better, according to the American Iron & Steel Institute. Only once before in the history of the industry has such a record been equalled and that was in September and October 1943.

* * *

"ACCORDING to Washington consensus, if the remainder of the Administration's legislative projects are to be enacted there will have to be more give-and-take between White House and Capitol Hill":—Chamber of Commerce of the U. S.

* * *

IT is noteworthy that three months of the life of the 81st Congress have passed with comparatively trifling statutory accomplishments.

* * *

FROM May 19, 1948 to January 31, 1949, 69% of all Naval contracts, representing 31% of the total dollar value, was awarded to the Nation's small businesses, according to a report from the Department of the Navy.

* * *

NORTHERN California Industrial development for February shows 33 new plant and 23 plant expansions representing an investment of $15,400,000:—San Francisco Chamber of Commerce.

* * *

CALIFORNIA'S steel capacity during 1949 will increase 6% over 1948, while the 1950 potential looks like a 24% gain over 1949:—Iron, Steel & Allied Industries of California.

* * *

"THE Congressional honeymoon has turned out to be hardly more than a lost week-end."—Frank W. Cortright, Exec.-Vice-Pres., National Association of Home Builders.

* * *

U. S. families with incomes of $5,000 a year or more now pay 37% less rent, on the average, than did families in this income group in 1940:—Construction Industry Information Committee.

* * *

"LAW, regardless of what subject it touches, should seek to promote the public interest. If it does that, it will in the long run, protect the general interest of the people whom it affects.":—Hoyt P. Steele, Vice-Pres., Benjamin Elec. Co.

IN THE NEWS

ARCHITECT SELECTED

John L. Reed, architect, San Francisco, has been selected to design a new grammar school for the Millbrae Elementary School District, San Mateo county.

RADIO RELAYS

The H. H. Larsen Company of San Francisco has been awarded a contract to build five radio relay stations on mountain tops of the west side of the San Joaquin Valley.

REJECT BIDS

The County of Fresno recently rejected a bid of $443,000 submitted for the construction of a Nurse's Home Building at the Fresno County General Hospital. The building was specified by architects Fred L. Swartz and Wm. G. Hyberg of Fresno, as a 2-story reinforced concrete construction with Roman brick exterior.

SPECIAL ELECTION

Voters of Merced (California) will go to the polls on May 20th to decide on the issuance of a $1,150,000 bond issue for the construction of a new High School Building.

FIELD HOUSE

Zoellner Construction Company, San Anselmo, has been awarded a $11,329 contract for the construction of a Field House for the Tamalpais High School in Mill Valley.

Kump & Falk, San Francisco, are the architects.

AIR TERMINAL

Lloyd D. Hibner, Fresno, has been awarded a contract by the City of Fresno for the construction of an addition to the Air Terminal Building at the Fresno airport at a cost of $74,000.

Philip S. Buckingham, Fresno, is the architect.

RACE TRACK

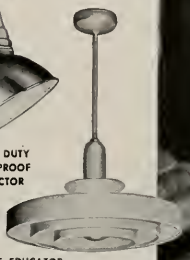
A $700,000 addition to the grandstand and club house will be made by the California Jockey Club, Inc. to their property at Bay Meadows Race track near San Mateo.

EXPANSIONS and new plants in northern California and the Bay Region amounted to $4,939,500 in the month of March 1949.

ILLUMINATION IN THE MAKING

SEPARABLE HOOD SIGN REFLECTOR

HEAVY DUTY VAPORPROOF REFLECTOR



THE EDUCATOR MFD. UNDER SILVRAY PATENT NO. 2303747

RLM STANDARD DOME REFLECTOR

THE SIRIUS

RLM SOCKET TYPE GLASSTEEL DIFFUSER

THE MASTER FLOODLIGHT

A simple step in the process of manufacture... some might take it for granted...we don't. The careful, precision forming of a reflector neck is an important process to the man at whose machine a veritable catalog of Smoot-Holman reflectors and luminaires begins to take shape.

SMOOT HOLMAN COMPANY
SMOOT-HOLMAN
INGLEWOOD CALIFORNIA
MADE IN U.S.A.

Offices in Principal Western Cities—Branch and Warehouse in San Francisco

WITH THE ENGINEERS

(From Page 35)

talk on the subject "Industrial Controlled Atmosphere". Mr. Koebel covered the history and development of controlled atmosphere from the blacksmith forge to that for the bright annealing or copper brazing of corrosion resistant steels.

He explained the various initial attempts to control scaling in open fired furnaces by proper adjustment of air fuel ratio. With the advent of the muffle type furnaces the demand for an atmosphere which would neither scale, carburize or decarburize during heat treatment stimulated research in this field which resulted in the development of the present controlled atmosphere generators. Inert gases such as nitrogen or hydrogen were among the first attempts but infiltration resulted in atmospheres which were very decarburizing. Straight natural gas resulted in carburization of the parts which proved to be as bad as decarburization. Partially combusted gases were found to be satisfactory for relatively low carbon steels.

Koebel described two modern atmosphere generators for use in the heat treatment of steels, the charcoal generator and the endothermic generator. The charcoal generator is simple and ideal where low initial cost or occasional operations is in the picture. The cost of gas generation is relatively high. A small amount of propane added at the generator improves the operation by neutralizing the effect of the one-half of one per cent of CO_2 generated. An especially developed charcoal low in moisture content has been developed for use with this generator. The endothermic generator cracks a mixture of air and hydro-carbon gas into CO, H and N. By careful control of air gas ratio and high temperature cracking the CO_2 can be eliminated and the dew point of the generated gas controlled. He stated that with this type equipment a gas could be generated and maintained, which would be in equilibrum with any carbon content steel.

Touching on the use of the gas generated by the endothermic method as a carrier for carburizing and dry cyaniding, he outlined a new development in the high speed furnaces in which the pre heat and high heat furnaces are integral. The work is shoved from one zone to the other and quenched in a waterjacked atmosphere chamber without exposure to air, thus eliminating all scale. A research project involving the use of hydrogen for the bright copper brazing of stainless steels was sketched. A special sealed furnace having purging chambers at each end was used in this project.

Mr. Koebel's talk left the members with a clear understanding of the importance of research in relation to industrial atmospheres.

EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

Election of Lydik S. Jacobsen as president of the recently formed Earthquake Engineering Research Institute, makes available for the first time an organization whose study of earthquakes, and earthquake conditions, should be of tremendous value to the engineering and construction industry.

The new organization is the result of efforts of the U. S. Coast and Geodetic Survey to coordinate the study of the seismological problem, through the appointment of an Advisory Committee two years ago.

Other officers of the organization include: George W. Housner, Vice-president; Franklin P. Ulrich, Treasurer; and John A. Blume, Secretary. Offices are located with the Secretary at 45 Second Street, San Francisco.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"The Legal Liability and Responsibility of the Structural Engineer" was the subject of a talk by Harry J. Neubarth, Superior Court Judge, pro-tem, and San Francisco Municipal Court Judge, in which he stressed several interesting phases of engineering, including whether the Structural Engineer is an agent of the owner when directly employed for the design of a structure; when engaged on a subcontract by an architect employed by the owner, the relationship the Structural Engineer to the architect; and proving faulty design.

Through the cooperation of Harry C. Vensano, Director of the San Francisco Public Works Department, the May meeting program was devoted to a discussion of "Transportation Plan for San Francisco", with Charles E. DePeuw the principal speaker.

Bay Area transportation is a hot subject at this time and San Francisco's plans for handling of future motor vehicle traffic is a vital factor in any overall plan for meeting bay area traffic and transportation needs.

* * *

LEGISLATION:

The California Legislative Council of Professional Engineers held its first meeting on April 2nd at Sacramento under the direction of its 1949 Chairman, Mr. Harold B. Hammill. This Association was represented by J. G. Wright and Jack Y. Long.

In addition to the original nine Civil Engineering groups the meeting was attended by five Mechanical, Electrical and Chemical Engineering groups. Also admitted to membership in the Council was the Bay Counties Civil Engineers and Land Surveyors.

Of the Legislation dicussed at the meeting, the

(See Page 40)

IN THE NEWS

ARCHITECTS SELECTED

Harry A. Thomsen, Jr., and A. L. Wilson, Architects, have been selected by the San Francisco Board of Education as the architects on the new Sunset Community Center Junior High School. Some $2,400,000 has been allocated for the project.

BOWLING ALLEY

Siri & King, Guerneville contractors, have been awarded a $60,000 contract for the construction of an 8-alley Bowling Alley Building in Guernewood Park on the Russian River in Sonoma County.

SUNDAY SCHOOL

The First Presbyterian Church in Burlingame has awarded a contract to C. H. Bessett, Burlingame, for the construction of a Sunday School Building at a cost of $48,517. James H. Mitchell, San Francisco, is the architect.

GIRLS SHOWER

The San Mateo Union High School District has awarded a $154,991 contract to Jos. Bettancourt, San Mateo, for the construction of a reinforced concrete girls shower, dressing and locker room addition to the San Mateo High School.

Kump & Falk, San Francisco, are the architects.

IVANHOE SCHOOL

The Ivanhoe Elementary School District (Tulare county) has awarded a general contract to Flowers & Shirley of Tulare for the construction of a $173,628 new grammar school at Ivanhoe.

Wm. Glen Balch (Arch) & Louis L. Bryan, Los Angeles, are the architects.

PETALUMA SCHOOL

The Petaluma Grammar School District has awarded a $145,783 contract to the Midstate Construction Company of San Francisco for the construction of a 5-classroom, kindergarten, office and toilet Grammar School.

Robert Stanton, Carmel, is the architect.

POLICE STATION

George J. Harder, Oakland, has been awarded a $12,370 contract for the construction of a frame and stucco addition to the El Cerrito police station.

Harry A. Bruno, Oakland, is the architect.

NEWSPAPER REMODEL

The Solano Builders, Vallejo, have been awarded a $25,637 contract for the construction of a new front and interior remodel of the Times Herald Publishing Company of Vallejo.

Ray F. Keefer, Oakland, is the architect.

SCHOOL BONDS

Residents of Palo Alto recently approved a $1,495,000 bond issue at a special election for the purpose of building an addition to the Palo Alto grammar school.

ARCHITECT SELECTED

Hertzka & Knowles, Architects, have been selected to design the new $750,000 Fremont Elementary School in San Francisco.

STORE BUILDING. The Ralph Murphy & Sons Construction Company of San Rafael has been awarded a $30,000 contract for the construction of a 1-story reinforced concrete store building in San Rafael.

ACOUSTI-CELOTEX

...the Best Known Name in Sound Conditioning ...brings the Comfort of Priceless Quiet and Better Hearing

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Why even small homes need concealed telephone wiring

Home owners appreciate extra conveniences — in small homes as well as large. And that usually means built-in conduit and extra telephone outlets. They may be located in the bedroom, living room, kitchen—wherever the user will spend a lot of time...now and in the future.

Beauty of home interior is assured with concealed wiring. And the cost is small. Telephones then can be added or moved later on without drilling holes. For free help in planning built-in conduit, call your local Pacific Telephone office and ask for "Architects and Builders Service."

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.

SAN FRANCISCO, CALIF. HEMLOCK 4100

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco - DO 8311

(From Page 38)

most important from a Structural Engineer's viewpoint is that of proposing changes in the Field Bill. On the recommendation of the Structural Engineers' and Consulting Engineers' delegates the Council strongly opposed any changes in the regulations governing school house construction. The Bills covering proposed changes are A.B. 376, A.B. 2196 and S.B. 1482.

* * *

NEW MEMBERS: Membership now includes Ralph A. Beebe, Ernst D. Kahlert, Milton G. Leong, and George D. Lodvick.

* * *

COMING EVENTS: Annual picnic at Mt. Diablo Golf & Country Club, July 16th; and Annual Convention of the State Association, Yosemite Valley, October 13-15.

NEWS & COMMENT ON ART

(From Page 8)

exhibition at the Architectural League of New York City, symbolizing the force of steel in modern life.

Murals on stainless steel by Miss Mullen have been installed at the Library of Congress, the U. S. Naval Academy, the Ministry of War in Buenos Aires, the Ministry of Communications in Rio de Janeiro, and the Great Lakes Naval Training Station.

AMERICAN INSTITUTE OF DECORATORS

Among members of the American Institute of Decorators exhibiting at the recent 18th Annual Conference in New York City, was the following from the West:

Tom Douglas, Los Angeles, subject "Hotel Decoration."

More than 85 designs were shown at the exhibit and as has been the custom in the past, they will go on tour throughout the United States for public showing.

M. H. DE YOUNG MEMORIAL MUSEUM

Walter Heil, director of the M. H. de Young Museum in Golden Gate Park, San Francisco, announces the following exhibitions and events at the Museum for the month of May:

A comprehensive exhibition of Modern Decorative Arts representing the artists and craftsmen of San Francisco and the Bay Area, and consisting of furniture, ceramics, jewelry, textiles, wallpapers, metal work, leather work, and hand bound and hand printed books.

The Third Annual of the San Francisco Potters and the Second Annual of the Contemporary Weavers will take place at the same time and will be coordinated with the various arts. This entire

(See Page 43)

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

ONDS—

Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

RICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$31.00 per M—truckload lots, delivered.

Face Brick—$80.00 to $105.00 per M. truckload lots, delivered.

Cartage—Approx. $9.00 per M.

Paving—$75.00.

UILDING PAPER—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00

UILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.80 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.
Sash weights, cast iron $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	$4.75
Nails, per keg, base	$11.00
8 in spikes	9.00
Rim Knob lock sets	2.15
Butts, dull brass plated on steel 3½x3½ 6lc	

ONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.94
Crushed Rock, ¾" to 1½"	$2.38	$3.13
Roofing Gravel	2.81	3.50
River Sand	2.50	3.06

Sand—

Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.38 per bbl. f.o.b. car; delivered $3.60.

Per Sack, small quantity (paper) $1.00

Carload lots, in bulk per bbl 3.00

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White — 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

1-2-4 mix. to 10 yards*	$10.80
10 to 100 yards*	9.80
Over 100 yards*	9.30

* Delivered to site.

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricasal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—

$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $5000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—1/8"—$3.50 sq. yd. 3/16"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

25/32 x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

25/32 x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

25/32" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .35 per □ ft.
Double Strength Window Glass	.50 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
Polished Wire Plate Glass	2.50 per □ ft.
Rgh. Wire Glass	.65 per □ ft.
Obscure Glass	.45 per □ ft.

Glazing of above is additional.

Glass Blocks $2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Siselation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common ..... $85.00 per M
No. 2 Common ..... 83.00 per M
Select O. P. Common ..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry—6 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	18c to 20c per ft.
Plyscord	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—

Red Cedar No. 1—$13.00 per square; No. 2, $10.50; No. 3, $9.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—Tapered: ½ " to ¾" x 25"—$17.00 per square.
Resawn: ¾" to 1¼" x 25"—$22.00 per square
Average cost to lay shakes,— 8.00 per square

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, Copper Bearing, per carloads, per 100 sq. yds. $36.00
Standard Ribbed, ditto 38.50

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine ..... $1.85 per gal. in 5-gal. cont.
Raw Linseed Oil ..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil ..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil ..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Seilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd. ½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
Redwood Shingles, $15.00 per square in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ..... $18.25 square
5/8 x 16"—#1 Cedar Shingles, 5" Exposure ..... $18.00 squa
4/2 #1-24" Royal Shingles, 7½" Exposure ..... $23.00 squar
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laic
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $24.0
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure ..... $29.(
1 x 25" Resawn Cedar Shakes, 10" Exposure ..... 22.(
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. S. & S. Class B and heavier, per ton ..... $99.
Vitrified, per foot:
Standard, 8-in. .....
Standard, 12-in. .....
Standard, 24-in. ..... 3.
Clay Drain Pipe, per 1,000 L.F.
in carload lots:
Standard, 6-in. ..... 160.
Standard, 8-in. ..... 265.

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardwe $2.80 per sq. ft., size 12'x12'. $3.75 p sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvanized iron, 65c sq. ft. (flat).
Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of m
$270 per ton erected, when out of sto

STEEL REINFORCING—

$200.00 per ton, in place.
¼-in. Rd. ..... $
⅜-in. Rd. ..... (
½-in. Rd. ..... (
⅝-in. Rd. ..... (
¾-in. & ⅞-in. Rd. ..... (
1-in. & up ..... (

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.75 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$2.00 per sq. ft.
Asphalt Tile Floor ⅛" x 9"—9 .40 per sq. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—

Glazed Terra Cotta Wall Units (single to laid in place—approximate prices:
2 x 6 x 12 ..... $1.25 sc
4 x 6 x 12 ..... 1.50 sc
2 x 8 x 16 ..... 1.45 sc
4 x 8 x 16 ..... 1.75 sc

VENETIAN BLINDS—

75c per square foot and up. Installe extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilator

(From Page 40)

exhibition will be devoted to a complete panorama of "everyday arts" to be shown in San Francisco for the first time.

CALIFORNIA COLLEGE OF ARTS AND CRAFTS

Link Malmquist, art director of Foote, Cone & Belding Advertising Agency, San Francisco, addressed the membership recently on the subject "The Design of an Idea."

Louis Moulthrop of Alameda, president of the alumni society, presided at the meeting which was held in Oakland.

THE SOCIETY OF WESTERN ARTISTS

The Society of Western Artists staged a Centennial Show at the Society's studio in the Western Women's Club, San Francisco, featuring pictures of the Gold Rush Days of '49, early San Francisco, and other subjects pertaining to the California Centennial spirit.

Gail Kennedy is Chairman of the Centennal Show Committee.

SAN FRANCISCO FEDERATION OF ARTS

The San Francisco Federation of Arts, which came into being in 1931 by the group of civic-minded citizens who were instrumental in establishing the Art Commission, recently elected John S. Bolles, Architect, president, succeeding Mrs. Hans Klussman.

The Federation is composed of member groups, including the American Institute of Architects, and represents organizations primarily interested in making San Francisco a more beautiful city.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to April, 1949.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	Santa Clara	Solano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	3.00	2.81¼	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.0375	2.0375	2.0375	2.8375	2.1125
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.2375	2.2375	2.2375	2.2375	2.2375
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.00**	2.50*	2.81¼	2.81¼	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.2375	2.2375	2.2375	2.2375	2.2375
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.50*	2.81¼	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.16	2.16	2.16	1.87½	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81¼	2.81¼	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.00	2.67½	2.67½	2.43¾	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:
CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

ARCHITECTURAL RENDERING by experienced architect and delineator. Perspectives of all types of structures; bird's eye views. Black and white and color.. Write to ARCHITECTURAL ILLUSTRATIONS, 1741 Silverlake Blvd., Los Angeles 26, California.

CONSTRUCTION ENGINEER (CIVIL)
GENERAL SUPERINTENDENT
PROJECT MANAGER

Twenty five years of wide practical experience on frame, steel, concrete and masonry buildings, of all types. Estimating, sub-division, sales, detailing & specification writing backround. Dependable, energetic. Excellent local references. Have car. Free to travel. P.O. Box 807, San Mateo, Calif.

WANTED: Product Engineer with experience wanted as a permanent addition to the staff of an industrial Development Department located in Minnesota. Work involves product development including travel for consumer contacts. Program relates to products from wood. Submit details education, experience, references, salary requirement, photograph.

All replies considered confidential and will be acknowledged. Reply Box 238, Architect and Calif.

Engineer, Inc., 68 Post St., San Francisco,

ENGRAVING—Good engravings are essential to a satisfactory job of printing reproduction. For the best, see Poor Richard Photo Engraving Co., 324 Commercial St., San Francisco.

WANTED: Top architectural designer, renderer, draftsmen of ability, by long established central western office.

Modern designer with background of historical architecture.

University graduate, European travel and study, or training at American Academy of Rome.

Good background, initiative, diplomatic, pleasing personality.

Prospective future partnership.

Furnish complete information, references. Box 110, Architect & Engineer, 68 Post St.

PHOTOGRAPHY: Building, Construction, Publicity, Aerial photographs by thoroughly experienced Photographers. Black & White, Color, Stills and Motion Pictures. DEB Photos, 929 Hearst Building, San Francisco.

CEDARWALLS
Pre-Stained Red Cedar Sidewall Shingles
Meet all requirements of building codes, including San Francisco.
NEW WONDER-KOTE PROCESS
In 9 attractive shades and white.
Machine grooved factory-finished.
Carton Packed.
Write for Name of your Local Dealer
SIDEWALL LUMBER COMPANY
1994 Oakdale Ave. • San Francisco 24 • ATwater 2-8112

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

Boiles has been active in the organization for many years and is the third architect to serve as president, the other two being Irving Morrow and J. Francis Ward.

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., director of the California Palace of the Legion of Honor in Lincoln Park, San Francisco, has announced the following scheaule of exhibitions and special events for the months of May:

EXHIBITIONS: Trompe l'Oeil and Illusionism, opening May 4; Paintings by Nell Sinton, through May 8; The Navajo: Exhibition of Photographs circulated by Life Magazine, through May 10.

EDUCATIONAL ACTIVITIES:

Art classes for children, ages 8 through 15, each Saturday morning at 10. Conducted by Lilly Weil Jaffe and Frank Lobdell.

Adult painting class will be held Saturday afternoons at 2:00. Instruction by Frank Lobdell.

Lecture series by Dr. Jermayne MacAgy on Wednesday mornings. Subject to be "Illusionism and Trompe L'Oeil."

Gallery tours each Friday at 2:30 p.m. by Lilly Weil Jaffe. Subject: Illusionism and Trompe L'Oeil Exhibition.

ORGAN PROGRAMS: Organ recital by Uda Waldrop every Saturday and Sunday, 3 p.m.

ART INSTITUTE OF CHICAGO

The growth of American culture from 1650 to 1815 will be shown in a group of paintings, silver, and architecture at the Art Institute of Chicago, Michigan Avenue at Adams Street, Chicago, through June 19th.

Lenders to the exhibition include churches, historical societies, art museums, universities, state capitols and private collectors.

PORTLAND ART MUSEUM

Thomas C. Colt, Jr., director of the Portland Art Museum, West Park and Madison, Portland, has announced the following schedule of exhibitions at the museum for the month of May:

Museum Art School exhibit; Watercolors, by Ruth Halvorsen; Swiss Collection of Paul Klee; Oregon Guild of Painters and Sculptors, and Landscape Architecture of Oregon.

METART GALLERIES SAN FRANCISCO

Showing at the Metart Galleries, 527 Bush Street, San Francisco, during the month of May is a group of work by William Huberich. Watercolors, gouaches, monotypes, drawings and prints are also being shown.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

* * *

101. STEELINE RESIDENCE CASEMENTS

The growing demand for Steeline Residence Casements has prompted the Soulé Steel Company to issue a new enlarged folder covering many new types and sizes. This new folder includes a page of full size bar sections, several installation instruction views, hardware details, glass sizes, and many other items of useful information. AIA—16-E-1, 11 pages illus. 2/49.

* * *

102. KITCHEN MAID KITCHENS

A folder showing 10 typical Kitchen Maid Kitchens with the latest trends in kitchen design. Excellent detail on specifications for wall units. Features wood cabinets with new appliance styling. AIA—35-C-12, 12 pages illus. 6/48.

* * *

103 MARLITE PANELS

New 12-page, full-color catalog has just been issued by Marsh Wall Products on Marlite. All finishes, colors and patterns of Marlite are illustrated and described and a section on installation and specifying is included.

* * *

104. VERMICULITE PLASTER

This booklet contains essential facts covering Vermiculite plaster fireproofing. Explanations of the high fire-resistance obtained with Vermiculite plaster; an analysis of the savings in dead load and steel by the use of this material; construction views of jobs; typical fireproofing details and a summary of fire tests made on constructions using this material. AIA 21-A-7, 15 pages illus. 3/21/49.

* * *

105. ROTO-CLONE

The type N Roto-Clone, used for collection and control of dust generated in manufacturing and process operations, has been re-designed to permit wider application and improved performance. Bulletin No. 277-A has been issued to cover the new features of this Hydrostatic precipitator.

ARCHITECT AND ENGINEER,
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

101 102 103 104 105

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after June 15th. A. & E.)

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer

REPUBLIC STEEL

See Sweet's Catalog File or write us for full information.

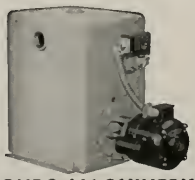
REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO

DENVER, COLORADO . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. 5-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT

Pumping Machinery for Every Purpose



For Service Call DOuglas 2-6794 or MUtual 8322

SIMONDS MACHINERY CO.
SAN FRANCISCO, 816 FOLSOM
LOS ANGELES, 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers
of
Domestic and Imported Marbles

525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834

COMES FOR ALL TIME VERMONT MARBLE

IN THE NEWS

CHAPEL

W. H. Connor, Berkeley, has been awarded a $82,000 contract for the construction of a Chapel in Berkeley for the Baptist Divinity School of Berkeley.

Ratcliff, Haymond & Ratcliff, Berkeley, are the architects.

COUNTY HOSPITAL

The County of Trinity has awarded a contract to H. W. Robertson of Sacramento for the construction of a 20-bed County Hospital in Weaverville at a cost of $251,000. Of reinforced concrete and frame construction the hospital will be a 1-story with basement.

O. A. Deichmann, San Francisco, is the architect.

ARCHITECT SELECTED. W. D. Peugh, San Francisco, architect, has been selected by the San Francisco Board of Education as the architect on the new Silver Avenue Elementary School which is to be built at an estimated cost of $750,000.

MEDICAL BUILDING. The Acme Construction Company has been awarded a $21,273 contract for the construction of a 1-story concrete block Medical Building in Modesto. Russell G. DeLappe, Berkeley, is the architect.

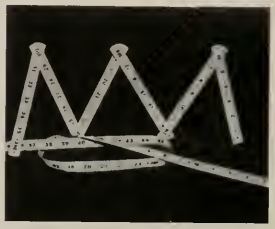
JUVENILE HALL

Contra Costa County has awarded a general contract to Haas & Rothschild of San Francisco for the construction of a one- and two-story reinforced concrete Juvenile Hall Building at a cost of $489,400.

E. Geoffrey Bangs, San Francisco, is the architect.

NEW FOLDING RULE

A revolutionary bright white indestructible enameled 6 ft. zig-zag folding rule has been put on the market by the Durall Tool Corp'n, Yonkers, N. Y.



Made of special hardened and tempered alloy steel, it can be bent and twisted like a pretzel and will spring back into normal shape. Weighs 3 1/5 ozs.

Can be used to take inside measures pipe, rounds and pulleys; straight edge, and extends rigidly for out of reach measurements.

UNION HALL

The AFL Electrical Workers Union of San Mateo have awarded a contract to Cattich Bros. and Stevenson of Redwood City for the construction of a Union Hall in San Mateo. Of 1-story frame construction, the building will consist of a union hall three stores and four offices.

W. H. Toepke & Otto Hintermann, San Mateo, are the architects.

ARCHITECT SELECTED

W. P. Day, architect, San Francisco, has been selected as the architect for the new $600,000 Hillcrest Elementary School to be built in San Francisco by the City and County of San Francisco.

VETERAN'S MEMORIAL

A general contract has been awarded to Pete Anderson of Eureka (California) for the construction of a $68,870 Veteran's Memorial Building in Ferndale.

Frank T. Georgeson, Eureka, is the architect and construction of the building is under authority of the County of Humboldt.

GRAMMAR BUILDING

The Loleta Elementary School District, Humboldt county, has awarded a contract to A. C. Johnson & Son of Eureka for the construction of a 4-classroom Grammar School Building in Loleta at a cost of $109,939.

Frank T. Georgeson, Eureka, is the architect of the frame and stucco structure.

AIRPORT BUILDING

The city of Nevada City (California) has awarded a contract to Louis Brown of Nevada City for the construction of an Airport Building at the municipal airport.

NEW HANGAR

The first unit of United Air Lines construction program at the new Seattle-Tacoma Airport will consis of a nose hangar 260 feet long by 70 feet deep.

Included in the steel structure will be shops for radio and electrical work, welding and genera repair and maintenance.

HOSPITAL ADDITION

Claude M. Moorman of Stockto has been awarded a $32,075 con tract for the construction of a 1 story frame and stucco addition t the Bunney Hospital in Fairfield

Howard G. Bissell, Stockton, i the architect.

HOSPITAL CONTRACT

H. W. Robertson of Sacrament has been awarded a $251,000 cor tract for the construction of a re inforced concrete and frame

Subscribe Now —

ARCHITECT and ENGINEER

$3.00 Per Year

CRITICAL CLIENTS PREFER—

CABOT'S COLLOPAKES

32 Lively Colors — No Adulterants Are Used

CABOT'S patented COLLO PAKING process results in a durable, Porcelain-Smooth Surface—Stays Clean—Resists the elements for years.

Write for color card, showing 32 colors.

GUNN CARLE & CO

20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO • SACRAMENTO
OAKLAND - LOS ANGELES - DENVER

Fine ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO 11

story and basement, 20-bed Hospital in Weaverville.

O. A. Deichman, San Francisco, is the architect.

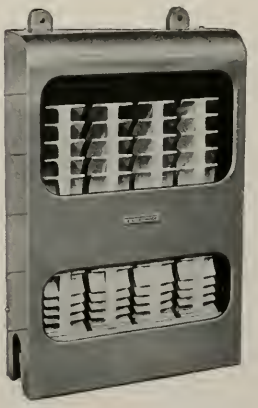
BONDS VOTED

The Salinas Valley Memorial Hospital District, Salinas, has approved the issuance of $2,000,000 in bonds for the construction of a new 133 bed Memorial Hospital.

Robert Stanton, Carmel, is the Architect.

EXPLOSION-PROOF ELECTRIC HEATER

Heating hazardous locations safely, efficiently, and at low cost has been solved by the new Electromone All - Electric Explosion - Proof Heater, which is the first all electric explosion proof heater to comply with Underwriters' Laboratories Class 1, Group D, Hazardous Locations, and receive their approval.



Designed for use in atmospheres containing gasoline, petroleum, naphtha, acetone, benzol, solvent vapors and natural gas, and also may be used in places where inflammable gases, mixtures and substances are manufactured, used or stored.

The heaters are available in three models with ratings of 2000, 4000 and 6000 watts, designated as Models CX-2, CX-4 and CX-6. Complete information available by writing General Electric Supply Corp'n, Graybar Electric Co., Inc., distributors, or Russell & Co., manufacturers' representative, 1335 Market Street, San Francisco.

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING • PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard
Interior Trim — Gutters
Special Moldings

The place to SAVE
is
LUMBER MANUFACTURING CO.
225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

STATIONERY
SCHOOL & OFFICE
SUPPLIES
•
Printing Engraving
Announcements
•
CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

Index to Advertisers

ANGIER Pacific Corp. *
ARCHITECTS Reports 40

BAXTER & Company, J. H. 36
BURKE, W. J. & Co. ..... *

CLARK, N. & Sons ..... *
CLASSIFIED Advertising 43
CENTER Stationery 48
CLINTON Construction Company 44
CONTINENTAL Water Heater Co. 29

DETROIT Steel Products Co. 5
DINWIDDLE Contruction Co. 47
DUFFY Tile Co. 48

FIREBRICK Construction Co., J. N. J. *
FORDERER Cornice Works 40
FULLER, W. P. Co. ..... *

GLADDING, McBean & Co. 6
GUNN, Carle & Company 46

HANKS, Inc., Abbott A. 48
HAWS Drinking Faucet Company 30
HERRICK Iron Works 47
HOGAN Lumber Company 44
HUNT, Robert W., Company 48
HUNTER, Thos B. 47

JOHNSON, S. T. Co. ..... *
JUDSON, Pacific-Murphy Corp. 40

KRAFTILE Company 31

LUMBER Manufacturing Co. 48

MARBLE Institute of America 2
MATTOCK, A. F. Co. 48
MICHEL & Pfeffer Iron Works ..... Inside Back Cover
MILLER Company, The ..... *
MULLEN Mfg. Co. 47

NORTHERN California Electric Bureau 35

PACIFIC Clay Products Co. ..... *
PACIFIC Coast Gas Association ..... Inside Front Cover
PACIFIC Manufacturing Company 45
PACIFIC Portland Cement Company ..... Back Cover
PACIFIC Telephone & Telegraph Co. 39
PITTSBURGH Testing Laboratory 48
POOR Richard Engraving Co. 47

REMILLARD-Dandini Co. 48
REPUBLIC Steel Corporation 45

SCOTT Co. 47
SECURITY Valve Company 32
SIDEWALL Lumber Co. 44
SIMONDS Machinery Company 45
SISALKRAFT Company 44
SMOOT-Holman Co. 37
SOULE Steel Co. ..... *
STANLEY Works, The 33
SWINERTON & Walberg Co. 47

TAYLOR Co., Halsey W. ..... *
TORMEY Company, The 47

U. S. Bonds 1

VERMONT Marble Company 45

WESIX Company ..... *
WESTERN Asbestos Co. 39
WOOD, E. K. Lumber Company 36

*Indicates Alternate Months

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company

ENGINEERS

Inspection - Tests - Consultation
Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities
San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

TILE CONTRACTOR

Shower Doors, Tub Enclosures
Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

DUFFY TILE CO.

253 Minna St., S. F. YUkon 6-141

ARCHITECT AND ENGINEER

GENERAL PETROLEUM BUILDING—Los Angeles

WALTER WURDEMAN and WELTON BECKETT, Architects

JUNE 1949

Ceramic Veneer provides durability and beauty for Prudential

Wurdeman & Becket, Architects
Wm. Simpson Construction Co., General Contractor

The Prudential Insurance Company made Gibraltar its symbol of permanence. It is appropriate that its new Western Home Office in Los Angeles has Ceramic Veneer facing the horizontal wings. This machine-perfected terra cotta...with its warm, nonfading color...its modern reeded surface...its resistance to soiling...is also durable and permanent.

Not only in Los Angeles but in *all* the principal Pacific Coast cities, you'll find the majority of larger buildings faced with Ceramic Veneer. Many smaller buildings, too. Its versatility makes Ceramic Veneer ideal for store fronts and modernizing. You are invited to investigate the various ways Ceramic Veneer can serve you and your clients.

75 YEAR

CERAMIC VENEER IS A GLADDING, McBEAN & CO. PRODUCT

Other quality ceramic products include Hermosa Tru-Joint Tile, Face Brick, Roof Tile, Floor and Patio Tile, Refractories, Flue Lining, Vitrified Clay Pipe, Franciscan Earthenware and Franciscan China.
Offices at Los Angeles • San Francisco • Portland • Seattle • Spokane.

• ARCHITECT AND ENGINEER

VOL. 177 No. 3

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS, A.I.A.
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

The new 150-foot, height limit, General Petroleum Building is the largest office structure in Los Angeles. Designed by the architectural firm of Wuredman & Becket it features lightweight design, structural steel frame and lightweight aggregates. P. J. Walker Co. was the general contractor. Cover photograph of architect's drawings by Otto Rothschild. (See Page 16 for story.)

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

JUNE

EDITORIAL NOTES 4

NEWS & COMMENT ON ART 8

PRESIDENT AMERICAN INSTITUTE OF ARCHITECTS HAILS BUILDING INDUSTRY 10

TWO REMODELED INTERIORS, Designed by Klaus Pfeffer 11

MONUMENTAL GENERAL PETROLEUM BUILDING, Los Angeles 16
WALTER WURDEMAN & WELTON BECKET, Architects

ULTRA MODERN ROOS BROS. BUILDING, San Jose 22
ALBERT R. WILLIAMS, Architect

THE TRAFFIC PROBLEM CAN BE EASED 27
By LESLIE WILLIAMS, Engineer

A.I.A. ACTIVITIES 30

WITH THE ENGINEERS 32

PRODUCERS COUNCIL PAGE 34
J. WILSON PEELE, Editor

HEADLINE NEWS & VIEWS 36
By E. H. W.

IN THE NEWS 37, 46

BOOK REVIEWS, Pamphlets and Catalogues 39

ESTIMATOR'S GUIDE, Building and Construction Materials 41

BUILDING TRADES WAGE SCALE, Northern, Central and Southern California 43

CLASSIFIED ADVERTISING 43

CONSTRUCTION CONTRACTS AWARDED, General Data 44

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office, Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

EDITORIAL NOTES

SHOULD STOCKHOLDERS BE PROPERLY INFORMED

Today's trend among business leaders and corporations, whether large or small, is a realization of the operational value of keeping stockholders and the public well informed with current management problems and long term planning involving major policies of corporate management.

Mutually beneficial are the results of a well informed public cliental, an understanding stockholder, and a progressive management.

If such principles are essential to the conduct of a successful business, the same yardstick can be applied to government, because, every citizen is a stockholder in national government.

When so called business spends funds for a market, or products, survey to determine economic factors having a direct bearing on the continued and future conduct of such a business, the results of these investigations are passed along to the stockholders. By the same token the results of the Hoover Report, representing a detailed study of government and its position as representative of the American citizen, should be made available to the stockholders of America—the citizens. The "folks back home" have every right to know and understand the problems confronting their representatives in Congress and also to know the attiture of those officials holding government positions at a level to set, adopt and administer national policy.

* * *

Americans cannot be dictated to. Each American feels he can sacrifice much, but not one cent for tribute, be it to a foreign country, local gang czar or racket chief, or any organization.

* * *

STEEL INDUSTRY IN HIGH GEAR

Irving S. Olds, Chairman of the Board of Directors of the United States Steel Corporation, called attention to the problems and accomplishments of the steel industry in meeting postwar conditions, and some of Mr. Olds observations are well worth repeating:

"We have heard recently from certain quarters about the alleged need of increasing the steel-making capacity of the nation, the new mills to be built, if necessary, with Government funds. It may not be out of place to cite some recent production figures for the steel industry as a whole. In spite of the assertions of the critics, it is actual production, and not theoretical capacity, that furnishes steel to those who are in need of it.

"According to the records of the American Iron & Steel Institute, the American steel industry produced 24,053,181 tons of steel ingots and castings during the first quarter of 1949, a record for any quarter in the history of the steel industry.

"This industry production was approximately 2,000,000 tons larger than that for the first quarter of 1948, and exceeded in production for the fourth quarter of last year by more than half a million tons.

It is quite evident that the Construction Industry will greatly benefit by these production records, and by the end of 1949, the record of much needed residential, industrial, commercial, and governmental construction should set a new all time high.

* * *

AMERICANS AS PEOPLE ARE STILL RIGHT

Elmo Roper, noted opinion research man, in an article written for the Harvard Business Review, comes to the conclusion, as a result of 15 years of detailed questioning of American people, that the overwhelming majority of Americans are in favor of our system of private ownership and operation of business and consider private ownership and operation a fundamental human right.

"The people judge business," says Roper, "on three main points: 1) as a maker of products; 2) as a neighbor; and 3) as a citizen. They know that as a maker of products, American business has no equal. Their lives are intimately connected with the business concerns that operate in their neighborhood, and they like business generally as a neighbor. But they demand that business be a good citizen of the nation, operating in the national welfare."

Despite the fact that anti-business propagandists have drenched the people with distorted views over the past 15 years, they have not been able to shake American faith in the system that has given 115 million people the highest standard of living in the world.

* * *

National Home Week will be observed September 11-17.

* * *

KEYS TO HAPPINESS

Specially coined, gold-plated keys will be presented to purchasers of new homes by members of the National Association of Home Builders under a plan to acquaint families who purchase homes from the organized Home Builders with the importance of owning a home.

The transfer of ownership of property is traditionally expressed by the turning over of the keys, and it is felt the gold plated KEY TO HAPPINESS will add to the pleasure of home ownership.

correlated INTERIOR DECORATION

Thirty-six new Mills' wallpapers color-keyed to Fuller's Decorator Wall Paints. High-style for your finest decorating contracts.

Quick Facts: Fuller commissioned James Kemble Mills to design twelve distinctive papers (each in three color schemes) based upon the twelve key colors by Elizabeth Banning for Fuller's Decorator Wall Paints.

All papers are silk-screened with actual Decorator paints. This gives complete color-matching between papers and paints. And, since Fuller's Color Control Plan furnishes 216 formulations based upon these twelve key colors, color scheme variations are unlimited. Further, these are only the forerunners of about 150 new papers to be keyed directly into Fuller's Jewel Case of interior wall paint colors.

Alert, HOUSE & GARDEN learned of this remarkable forward step in interior decoration, came to San Francisco and received Fuller's permission to feature it in color in their May, 1949, issue (reproduced on opposite page).

These papers also were exhibited for three weeks at the De Young Museum, Golden Gate Park, San Francisco.

Papers now available at W. P. Fuller & Co. stores at San Francisco, Oakland, Hollywood, San Diego, Fresno, Phoenix, Portland, Seattle, Spokane, Boise and Salt Lake City.

Another FULLER *exclusive!*

FULLER COLOR CONTROL PLAN—This "finest color tool in the painting industry" contains the 216 interior wall paint formulations, paint-sprayed on 11x11-inch cards. Makes color selection easier, color checking faster, customer satisfaction sure. Definitely desirable for Architects, Color Consultants, Painting and Decorating Contractors.

for color FULLER IS FIRST

NEWS AND COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe Jr., director of the California Palace of the Legion of Honor in Lincoln Park, San Francisco, has announced the following schedule of exhibitions and special events for the month of June:

EXHIBITIONS: Paintings by Wright Ludington, opening June 3; Photographs of Mexico by William E. Loucks, opening the 3rd; and Illusionism and Trompe L'Oeil through June.

EDUCATIONAL ACTIVITIES: The children's and adult classes will not be held during June. Uda Waldrop organ recital every Saturday and Sunday at 3 p. m. Free motion pictures each Saturday afternoon at 3 o'clock.

PORTLAND ART MUSEUM

Thomas C. Colt Jr., director of the Portland Art Museum, West Park and Madison, Portland, Ore., has announced the following schedule of exhibitions and events for the Museum during the month of June:

EXHIBITIONS: An extensive collection of the Metropolitan Museum of Art comprising sculpture, arms and armor, and paintings. Paintings and drawings and prints by Paul Klee, loaned by the Paul Klee Foundation at Berne, Switzerland.

* * *

Evening Gallery Talks. A series of weekly evening gallery talks conducted by Dr. Erna Gunther, University of Washington: "Northwest Coast Indian Art"; Lloyd Reynolds, Reed College: "Five Year Loans from Metropolitan Museum"; Mrs. Rachael Griffin, Museum Art School and Catlin School: "Paul Klee"; and Hilda and Carl Morris "Paul Klee" proved very interesting to the public.

* * *

The last of a four-year series of exhibitions sponsored by the Oregon Guild of Painters and Sculptors opened on May 15, and an unusual exhibition of work by representative landscape architects of Oregon featuring residential garden plans, recreational playground and park designs, hotel, hospital and industrial ground area planting, opened on May 22.

CITY OF PARIS

The City of Paris, San Francisco, in conjunction with the San Francisco Architectural Club, will present a national exhibition of designs from the leading schools of architecture, entitled "Grande Prix," together with the jury and awards. The exhibition will be seen in the Rotunda Gallery.

In the Art in Action Shop, the pictures of the month will be a group of oils and watercolors by Karl Barmann. There will also be a special showing of looms, yarns, and woven materials.

METART GALLERIES

The Metart Galleries, 527 Bush Street, San Francisco, are showing a special exhibition of Sculptures by Jeremy Anderson, during the month of June.

Other displays include watercolors, gouaches, monotypes, drawings, and prints.

M. H. De YOUNG MEMORIAL MUSEUM

Walter Heil, director of the M. H. de Young Memorial Museum in Golden Gate Park, San Francisco, has announced the following exhibitions and events at the Museum for the month of June:

EXHIBITIONS: Drawings by Rico Lebrun, including studies for his monumental Crucifixion; Erle Loran showing of Oils and Watercolors; Paintings in Tempera by Elizabeth Maddux; Watercolors by Jan Rognas; Modern Jewelry under fifty dollars, an exhibit circulated by the American Federation of Arts; and a special showing of 19th Century French Paintings from the collection of Mr. and Mrs. Kurt Riezler of New York.

SMALL MISSION CHURCH DESIGN COMPETITION

A nation-wide competition among members of the A.I.A., undertaken by St. Joseph's College, Collegeville, Indiana, to develop a small mission church design which can be used for construction of a church at a cost not to exceed $20,000, has been won by architect S. S. Granger of Glendale, California.

The 171 designs submitted in the contest were stimulated by the National Catholic Building Convention and Exposition, to be shown in conjunction with its annual conference which is being held this month in Chicago.

Contest rules emphasized the fact that since small mission churches are usually built in smaller towns, the most simple and convenient materials and construction methods would be given special consideration by the jury consisting of the Most Rev. A. L. Fletcher, bishop of Little Rock, Ark.; Francis W. Kervick, head of the department of architecture, University of Notre Dame; Clair W. Ditchy, secretary, American Institute of Architects, Detroit; Rt. Rev. Msgr. J. B. Lux, vice president, Catholic Church Extension Society, Chicago; Alli-

son L. Vrydagh, architect Terre Haute, Ind.; the Rev. Herbert Eilerman, assistant pastor St. John's Church, Whiting, Ind.; Edward D. Pierre, architect, Indianapolis; Joseph J. Hulfeld, architect, Fort Wayne; Paul Schumacher, Mishawaka, Ind., and Monroe McGibeny, Ft. Wayne.

Russell E. Williams, architect, North Hollywood, was given "First Mention," and Daniel E. Lamont, architect, Seattle, Wash.; Carl H. Riesen, architect, San Francisco, and architects Alfred V. Chaix, Ralph W. Johnson and Charles A. O'Grady of Los Angeles received "Mention."

SIMPLIFIED PRACTICE RECOMMENDATIONS FOR COPPER WATER TUBE AND COPPER AND BRASS PIPE

Printed copies of Simplified Practice Recommendations R217-49, for Copper Water Tube and Copper and Brass Pipe, are now available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. (10c)

It consists of simplified list of types and sizes of copper water tube and copper and brass pipe. Dimensions and weights for 18 sizes of tubes and pipes are given as well as tolerance and recommended uses for the three types of tube covered.

SISALKRAFT APPOINTS NEW SALES MANAGER

Ray H. Anderson, Chicago, who has been associated with the Sales Department of The Sisalkraft Company since 1939, has been appointed Sales Manager succeeding the late W. Lawrence (Larry) Kennedy who served the company for more than 21 years and was popularly known throughout the West.

WATER SYSTEM FOR STATE PARK

A general contract has been awarded to the Arcata Pump & Electric Company for the installation of water systems in California State Parks located in Humboldt and Mendocino counties at a cost of $64,560.

All installations are in State Parks among the Redwoods.

ELECTRICAL SYSTEM

The 23rd District Agricultural Association has awarded a general contract to the Crabbe Electric Company of Pittsburg for the installation of an electrical distribution system, area lighting, and electrolliers at the Fair Grounds in Antioch.

Cost of the work has been set at $17,004.

DRILL TOWER

The City of Burlingame has awarded a contract to Moody J. Henry, same city, for the construction of a 4-story frame construction Drill Tower in Burlingame at a cost of $14,415.

Sharps & Brown of Burlingame are the architects.

AIRPORT DEPOT

The City of Redding has awarded a general contract to J. P. Brennan, same city, for the construction of a 1-story frame construction Airport Passenger Depot at the Municipal Airport at a cost of $42,349.

Wm. G. Merchant, San Francisco, is the architect.

LABORATORY

The Shell Development Company has awarded a $62,400 contract to the Latisteel Company of Pasadena, for the construction of a 1-story reinforced concrete and steel Laboratory Building in Emeryville.

FAIRLESS AWARDED GARY MEDAL

Benjamin F. Fairless, president of the United States Steel Corporation, has been awarded the Gary Memorial Medal for outstanding achievement in the iron and steel industry.

The award was made at the general meeting of the American Iron and Steel Institute in New York the latter part of May.

The Gary Memorial Medal was established by the American Iron and Steel Institute in 1927 to honor Elbert H. Gary, its founder and first president.

PLANETARIUM BUILDING

The California Academy of Sciences, San Francisco, has received a bid from Cahill Bros. Construction Company for the construction of a 2-story reinformed concrete and structural steel Planetarium Building for Golden Gate Park at a cost of $942,800.

Weihe, Frick and Kruse, San Francisco, are the architects.

The building will be of the dome type and will also include a Auditorium Memorial Hall.

RESIDENCES

Walker & Donant of Sacramento recently announced the start of construction on 24 residences at $7,000 each and 6 duplex residences at $12,000 each.

The houses are to be built at the corner of 53rd Street and Broad Street in Sacramento.

SCHOOL CONTRACT

The United Construction Company of Sacramento has been awarded a $149,767 contract for the construction of a 9-class room, kindergarten, office and toilet room grammar school building in Del Paso, Sacramento county.

Clarence C. Cuff, Sacramento is the architect.

PRESIDENT AMERICAN INSTITUTE of ARCHITECTS HAILS BUILDING INDUSTRY

The building construction industry in the United States is more efficient than in any other country in the world, in the opinion of Ralph T. Walker, newly elected president of the American Institute of Architects, but he warns that the "fat years are over" and the future must be met with intelligence and imagination.

Addressing a recent meeting of the New York Building Congress on the subject "How Efficient is the Building Industry", Walker urged greater cooperation and teamwork among all segments of the industry to "meet the demands for social needs with imagination and a willingness to produce at reasonable costs." He described the "team" as the designer, management and labor, and the material supplier.

He asserted that unless "we get together working out our problems so as to meet what our client —mankind—needs, we will find some super bureaucracy doing it for us; and telling us how to do it because it is part of the party line."

Walker, a member of the architectural firm of Voorhees, Walker, Foley and Smith, was introduced at the meeting by Bernard J. Gilroy, to more than 700 leaders in the building industry, engineers, contractors, architects, material suppliers, bankers and labor union officers.

The wage stabilization agreement in New York City was cited by Walker as an outstanding example of effective cooperation between labor and management in the public interest. He said: "We have consistently gained in efficiency in the application of the machine, nevertheless we have also consistently increased our own internal difficulties because we have rarely taken the larger responsibilities in coordinating the industry to achieve a team; one to be partners in production.

"Here in New York City, however, the record is excellent. The cooperation between the Building Trades Employers' Association and the Building, and Construction Trades Council, A. F. of L., has been farsighted and statesmanlike, resulting for this area in a sense of stabilization most desirable from every viewpoint."

Although admitting there were faults in the building industry, Walker emphasized that "the world still comes to our door to learn our methods." To maintain this standard of high efficiency, he urged management to assume greater "professional responsibility" to meet the years ahead "with more intelligence and imagination, and with more understanding of the importance of keeping a client informed as to the money he must spend."

In a warning to labor, he said building mechanics must "recognize the well known economic truth that if any one group attempts to offer resistance to changing conditions, the end result will be another way of accomplishment—another group of men doing the work and the first men gradually eliminated."

This same fact is true, he said, of other restrictions, "whether they belong to labor or the professions—restrictions in an advancing society are either overcome or by-passed and finally the work belongs to the unskilled."

Praising the achievements of the building industry during World War II, Walker said it "covered itself with glory and produced amazingly, wherever required". In the field of design he said progress is being made that "amounts to a revolution". In construction, he said it would not be difficult "to give many examples of new methods and techniques—the marvelous assembly line of largely prefabricated working parts to produce large buildings, and the same techniques applied to small houses in sizable quantities throughout the land, and even for the small individual builder the increased efficiency which has come from powered hand tools and factory methods."

Answering critics of costs, he emphasized that the cost of building a family dwelling, "is definitely related to the cost of living and that with all the inherent troubles within the industry, the cost of urban building, with 1948 as an index, is well below the composite of all wholesale commodity prices."

Walker assailed critics who have compared the building industry with factory produced automobiles. "How much truth is there in the commonly

(See Page 40)

TWO REMODELED INTERIORS designed by Klaus Pfeffer

Photos by Roger Sturtevant

REMODELED BEDROOM

IN THE BERKELEY, CALIFORNIA HOME OF MR. AND MRS. FRANCIS KERAN

AN ILLUSION of greater space is achieved by the simple lines of the built-in furniture and by the long wood valance uniting the six windows.

Photos courtesy of BETTER HOMES & GARDENS

before

Klaus Pfeffer's design was executed by
A. Y. YERRICK

DORIS CONNER, A.I.D., interior decarator

after

REMODELED GUEST ROOM

IN THE HOME OF MR. AND MRS. FRANK G. STEWARD

before

Klaus Pfeffer's design was executed by DOUGLAS O. SMITH

DORIS CONNER, A.I.D., interior decorator

BUILT-IN FURNITURE conveniently divides this guest room into three separate areas—for sleeping, for dressing, and for comfortable lounging.

Photos courtesy of
HOUSE BEAUTIFUL

before

MONUMENTAL

GENERAL PETROLEUM

BUILDING — Los Angeles

THE OFFICE BUILDING OF TOMORROW

$8,000,000 GENERAL PETROLEUM OFFICE BUILDING — Los Angeles

Architects — *Designed by* **WALTER WURDEMAN and WELTON BECKET**

Contractor — **P. J. WALKER CO.**

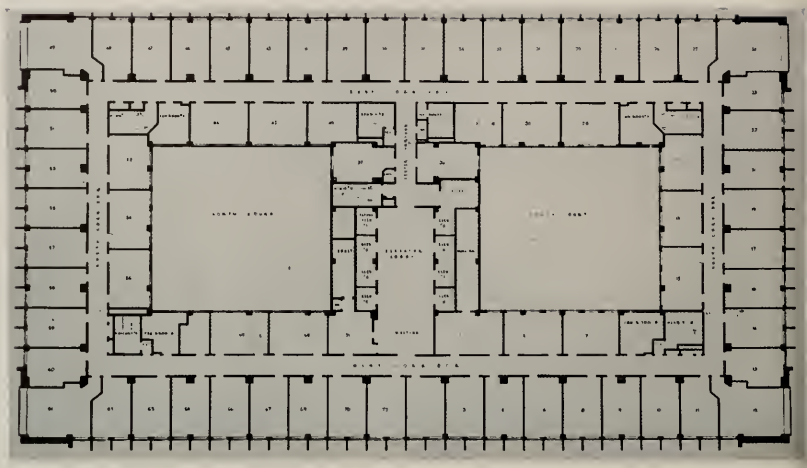
The "Office Building of Tomorrow" was recently opened to the public in Los Angeles.

Designed inside and out by architects Walter Wurdeman and Welton Becket, the new $8,000,000 General Petroleum Building is located on Flower Street and extends from Sixth Street to Wilshire Boulevard. It represents one of the first skyscrapers in the world to employ a modular system throughout the entire structure that allows for the expansion or contraction of offices at will, and provides a flexibility in floor plans unprecedented in modern office buildings.

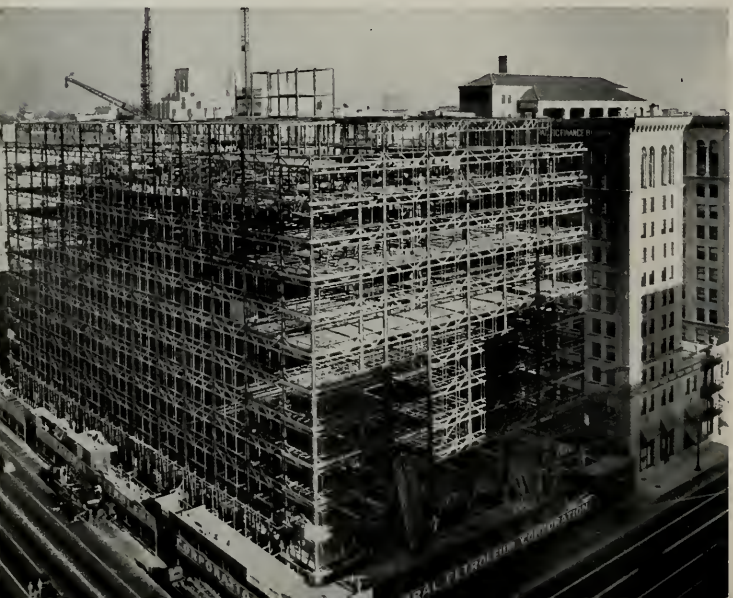
Although it is limited to 150 feet in height by Los Angeles City Building Ordinance, it contains over 500,000 square feet of floor space and it is the largest office building in the City of Los Angeles.

The new building is designed on and uses a seven-foot basic module, with movable partitions permitting offices to be instantly enlarged to any multiple of seven feet. A window and air-conditioning outlet in each module, and an underfloor duct system which can be tapped every five feet for light, telephone, and intercommunication outlets, increases the practicability of the modular

Aluminum fin Sunshades from third to thirteenth floor. They are cooled by a flue action within the fins.



TYPICAL FLOOR PLAN showing overall layout of building is a block-8 with 2 courts starting at the third floor. Outside offices are 14 feet wide and 21 feet deep (7-foot modular system used in building design). Inside offices are 21-feet long an 14-feet deep. Vault is used for storage of records. The panel room (right of south elevators) contains risers and transformers.



Air conditioning ducts and supports for sound proof ceilings, material was screwed to channels running from interior to exterior walls, are hung beneath ploster fireproof ceilings.

BELOW: View of 70-foot long office which may be divided into smaller offices without demolition or masonry construction. Movable partitions may be installed at any 14 feet along length of office. Ceiling air conditioning units may be installed ot any 7-foot interval. Wall seen in background is of steel insulated with rock wool and hos concealed fittings.

plan and reduces to virtually nothing the enormous expenses entailed in alterations in conventional office buildings. A portable lavatory-clothes press unit can be installed at every second module, and all lavatory cabinets are movable, just like a piece of furniture, as the plumbing attaches to any column—factors which further simplify the usual complications of remodeling a building.

As well as for its unique modular design the new building is distinguished by the architectural innovation of the huge aluminum fins which extend the height of the three main facades, shielding the office windows from the intense California sun, and the revolutionary construction techniques which have made the building one of the lightest and strongest of its size in the United States.

Aluminum Fins

The chief decorative feature of the exterior of the new building is the direct result of the architects' plan to cut the costs of air-conditioning the building.

Photos by

Arf Streib Studio

View of typical outside office; wall on the right is a movable partition which may be removed to enlarge office by a simple disassembly operation involving no destruction. All components of the wall are reusable.

The architects, with their mechanical engineer, Ralph Phillips, have long been concerned with the fact that the modern trend toward larger glass areas in modern California buildings has also meant greatly increased costs of air conditioning because the impingement of the direct rays of the sun upon glass areas has meant the transmission into the building of an enormous amount of unwanted heat.

Studies were made at the site of the position of the sun during the hours when the sun's rays transmit the maximum amount of heat, during the months when air conditioning equipment runs at maximum capacity. The results of these studies are seen on the chief facades of the building: vertical aluminum fins running the entire height of the building, which are 6 inches wide and 42 inches deep.

These soaring aluminum fins reach from the third to the thirteenth floor on three sides of the building. They are a device familiar to South American architects but seldom used in this country. The multiplicity of these vertical fins becomes a very striking architectural motif and so effectively screen out solar radiation that 300 tons of airconditioning refrigeration will be saved annually.

For the further assurance of perfect air conditioning, however, a weather factory huge enough to turn out a ton of ice every day for every office in the building, but sensitive enough to supply a different temperature every 14 feet throughout

View of waiting room area on the 8th floor. Each floor has a different photo-mural illustrating some phase of the oil industry. The divan is covered with bright green, the side chairs in light grey. Walls are grey.

Receptionist area of an upstair lobby; desk is placed by glass wall dividing lobby and flood lighted glass wall in rear. Behind this wall is a service room for messengers and mail distribution.

the entire structure has been installed.

Air Conditioning

Sixteen hundred horsepower on electric motors alone are used in the air conditioning and heating systems which include 48 separate fan rooms to provide a "zoned" control. Another 600 h. p. of capacity is contained in the four oil or natural gas boilers, and 900 h. p. of capacity in three centrifugal compressors brings the total to 3100 h. p. of weather making equipment.

A twin-duct system in which one duct brings cooled air and the other heated air to all parts of the building, provides for the structure to be heated or cooled simultaneously. The ducts join as they enter each air outlet, which are spaced to fit the modular design, at intervals of 14 feet. Each outlet has its own thermostatic control, and the controls operate dampers which automatically mix the hot and cold air to provide the desired temperature.

An average of eight complete air changes hourly are provided by using 25% outside air mixed with 75% re-used air which has been passed through a sound filter and past a bank of sterilizing lamps.

Heating

The entire heating of the building is accomplished by the hot air ducts, which comprise over 250 tons of galvanized steel and represent a fabrication of more than 20 miles in length.

The heating plant employs four steel boilers of a low pressure, portable design, each with a capacity of 21,250 sq. ft. EDR, with the burners using either fuel oil or natural gas

Construction

By the use of over 12,000 cubic yards of lightweight concrete aggregates whereby pumice was employed in place of sand and gravel in all concrete above the first floor, and by utilizing vermiculite as fireproofing throughout, more than 13,000 tons were cut off the dead weight of the building. This material saving in dead weight of construction and tonnage of structural steel resulted in a construction cost saving of some 12%.

Hollow walls and a combination of lightweight

(See Page 26)

View of corridor; floor is of black rubber tile with marbleized effect in green and white. Walls are painted green; acoustical ceiling; doors and woodwork are matched Birch veneer.

GABRIEL MOULIN, Photo

NEW $2,000,000 ROOS BROS. STORE—San Jose, California

ALBERT R. WILLIAMS, Architect, A.I.A.

DINWIDDIE CONSTRUCTION CO., Contractors

ULTRA-MODERN
ROOS BROS
BUILDING — San Jose

Nationwide attention is being centered this year upon California's many colorful and historical Centennials which feature the progress of the State since arrival of the famed '49ers, and in keeping with this spirit of public recognition for 100 years of progress the recent opening of the new six-story, $2,000,000 Roos Bros store at First and Santa Clara streets in San Jose marks another progressive milestone in the long and colorful history of this pioneer firm.

The new Roos Bros store, replacing an old building on the corner site which has long been recognized as one of the landmarks of the San Jose area, is completely air-conditioned throughout and is one of the newer ultra-modern functional commercial buildings to be designed by Architect Albert R. Williams in northern California and is quite generally conceded to be one of the finest retail clothing establishments of the West.

The store has a nice corner entrance at First and Santa Clara which afforded the architect an opportunity to develop special entrance appeal without detracting from or interfering with the street-facing window displays. The front of the building, on both streets, presents a simplified modern design in architectural concrete with ample provision for use of natural lighting within the store where desired by use of spacious floor-to-ceiling windows.

A feature of the exterior is a large double neon clock on the structure's two corners, which is electrically timed and is 10 feet high. The seemingly small minute hands are actually 4 feet by 9 inches in length, and the hour hands are 3 feet 6 inches long. The hands alone contain some 70 feet of neon illumination, and as a public service to the community the two clocks are continuously lighted throughout the night.

TIME MARCHES ON:

Long a landmark to San Jose residents this old timepiece was replaced by a double neon clock on the corners of the new building.

Electrically timed the new clocks are 10 feet high; minute hands are 4 feet 9 inches and the hour hands 3 feet 6 inches.

J. O. TUCKER, Photo

FLOOR to ceiling windows and overall floor coverings with special designed furniture.

Strictly modernization of a protective canopy design, remniscent of the early days in California and a familiar architectural appendage to pioneer store fronts, has been designed by the architect to serve the purpose of protection from the sun without interference with the function of the building, nor does the permanent, self-attached canopy detract from the general pleasing appearance of the building.

The interior of the store is a striking example of modern, functional planning and casual yet ultra-smart decoration. Each floor has its own distinct decoration scheme which has been executed by leading designers to fit with the nature of the merchandise displayed in that particular department.

Another outstanding feature is the interior lighting which represents the very latest developments in commercial fluorescent slimline and incandescent light furnishing principles. Overhead lights have been recessed in some instances to obtain the desired lighting effect, and frequent use has been made of the recessed overhead spot to emphasize lighting in desired areas and upon desired display fixtures and merchandise.

SPECIAL LIGHTING embodies the latest in indirect fluorescent slimline and incandescent ceiling lens units to emphosize beauty of interior design, fixtures and merchandise.

FIXTURES and merchandise are emphasized by proper lighting.

'he six stories are served by the latest design nigh-speed elevators which are equipped with h newest control devices, and each elevator has ri automatic safety door and an automatic self-eeling floor device, plus automatic signaling eaipment which provides for maximum use of the elvators during rush, or peak load periods.

pecial provision has been made for complete ri conditioning of the store and to assure clean, ore air at all times, and irrespective of what wther conditions may be on the outdoors, the ri within the store is completely changed every ii minutes. In addition to heating the fresh air, rrooling, as may be desired to maintain a con-tat temperature throughout the store, the air is hroughly filtered for removal of any impurities vich may be in circulation such as dust or smoke.

he utility design of the new Roos Bros store ia in reality provided for five complete stores vhin the one, as each floor of the five-story build-ris devoted to special groups of men's, women's and boys' clothing. In turn each major department has been divided into smaller shops with individual decorations, lighting, fixtures and appointments.

The first floor consists of the men's furnishings department and a new enlarged sports shop for men. Arrangement of the storage facilities for reserve merchandise, adequate use of floor space for display of merchandise to customers, and special cabinet fixtures for display of numerous accessories, has been carried out with the desire for customer convenience and utility.

Le Deit Glass Co.
Look for This Sign

701 LENZEN AVE., SAN JOSE
Phone: BAllard 6432
SASH, DOORS, MILLWORK

SAN JOSE STEEL CO.
furnished the
REINFORCING STEEL
for all concrete work
on the Roos Bros.
Building
San Jose Steel Co.
Reinforcing and Structural Steel
Fabricators
195 N. 30TH STREET, SAN JOSE

Roos Bros. New Building
San Jose
PLUMBING
by
A. J. PETERS & SON
MECHANICAL CONTRACTORS
Plumbing, Heating and Utilities
Industrial Piping
534 STOCKTON AVENUE SAN JOSE, CALIF.

MACNSONS CONTRACTING ENGINEERS
PLUMBING, HEATING
AND AIR CONDITIONING
2301 Palm Avenue
San Mateo
151 Tehama Street
San Francisco

Two shops for boys' wear comprise the major part of the second floor. One shop is for small boys from the ages of 2 years up, while the other shop has been designed for boys approaching their teens.

The balance of the second floor has been set aside for general offices which include the manager, employment, and an enlarged credit department.

The third floor has been designed as a "man's domain" in which custom-made furniture in brown leather, rubber tile floors and walls of d'oro wood are finished in a deep brown. Merchandise consists of sports wear and men's furnishings.

The women's sport shop occupies the fourth floor and is featured by bright, modern rooms of blond birdseye maple and deep custom made carpets of contrasting hues.

Women's fashions feature the fifth floor, and luxurious carpetings of warm grey, grey walls and upholstery accented by occasional furniture in brilliant cherry, and numerous wall mirrors emphasize the merchandise appeal.

Employees' lunch room, locker rooms, and other recreational facilities for the store's employees occupy the sixth floor. Space has also been provided for a sun-deck which is available to employees during rest periods and lunch time.

GENERAL PETROLEUM BUILDING

(From Page 21)

concrete, court walls, and lightweight gunite exterior walls, were used in place of heavy steel beams.

The architects took advantage of recently enacted rulings by the Los Angeles Board of Buildings and Safety Commissioners regarding fireproofing requirements in Type 1 buildings, with the result that the floor panel systems are of steel joists and concrete slab construction, a type which heretofore has been prohibited in California. The structural spandrels are fabricated steel trusses which use the hollow exterior walls for fire protection.

The extremely light steel frame and lightweight aggregates resulted in substantial structural savings and is a result of the necessity for reducing building costs under today's conditions.

A new system for fireproof plastering was also employed wherein a lightweight mineral of the mica family with a melting point of 2500 degrees was applied in one-inch thickness and provides for a 4-hour protection against fire. An arc-welded, light weight steel joist was placed every 3½ feet between the main structural members to support the floor, and beneath the joists was constructed a "ceiling" of steel mesh coated with one inch of the lightweight plaster. This ceiling which extends from one main beam to another, is 16 inches deep. About 62,000 square yards of lightweight plaster were used and about 65,000 yards of other plasters were used, a total of 127,000 yards.

OVERHEAD sheet metal air ducts feed cold air from the blowers.

Power

A new technique which brings high voltage power closer to the point of use will save an estimated 20% in the power costs. As power enters the building at 5000 volts it is brought to a concrete vault in the basement which is, in effect, a sub-station of the Los Angeles Municipal Department of Water and Power.

Here the power is fed into giant transformers which break it down to 480 volts. The 480 volts is fed through heavy bus bars to four transformer rooms on the 3rd, 6th, 9th and 12th floors. Here another transformer cuts the power down to 120/208 volts which is the level necessary for the great bulk of needs in an office building.

In the main power vault in the basement are six 500-kva transformers, three for power and three for light. Controlling the 5000 volts is a switchboard which enables any one of three primary feed circuits to carry the entire load in the event of a failure.

Water Plant

A water treatment plant producing 201 gallons per minute of softened and filtered water has been

installed and consists of three filters, each capable of producing 67 gallons per minute. It is able to soften to zero hardness a total of 256,080 gallons each 24 hours, which is approximately the needs of a city of 5000 people. The softeners are fully automatic. All drinking water supplied to the building passes through an activated carbon filter and chiller.

Lighting Fixtures

As a means of assuring a maximum of lighting at all times and under all outside weather and natural lighting conditions, more than 4000 fluorescent recessed lighting fixtures have been installed throughout the building.

Total Design

Architects Wurdeman and Becket not only designed the building, but also all interior details including the furnishings, color schemes and fixtures. Even the pattern of the sculptured carpets in the executive offices were created on the architects' drafting boards.

Simplicity, depending on color, is the theme of the building, with the main body of the building in a warm grey-beige terra cotta; spandrels are gray-green terra cotta, and the base is of black granite. Ground floor areas will be leased for stores.

TACKLESS CARPET covers most of the 11,000 square yards of carpeted area.

FLOODLIGHTING

A contract amounting to $18,300 has been awarded to the Irrigation Pump & Electric Works of Chico, for installation of floodlights at the 3rd Agricultural District Fair grounds at Chico.

SAVINGS AND LOAN BUILDING: F. V. Hampshire, Salinas, has been awarded a $57,496 contract for the construction of a Savings and Loan Building at Salinas. Chas E. Butner, is the architect.

The Traffic Problem Can Be Eased

By LESLIE WILLIAMS, Engineer*

A noted traffic engineer sounded this grim warning recently: "Tomorrow the downtown districts may be studded with the abandoned remains of buildings as are the cities of Europe today."

The result of atom bombs? No, something less spectacular but perhaps just as damaging. He was referring to traffic congestion and its end-product "decentralization."

Are city officials worried? Plenty, and here's why: Every day more and more businesses and industries are striking out for the suburbs. For instance, a year ago the drive-in theatre was considered a novelty. Big city movie operators gave it hardly a passing nod. But today there are over 700 of these show places throughout the country and many more are being built all the time. Branch stores, too, have been multiplying. In some cases main stores have become little more than warehouses for their country cousins.

Home builders have also slipped into their seven-league boots and are heading for greener, less congested, pastures. They are building in sections where kids can play safely and where there isn't the frequent screech of auto brakes to make a mother's blood run cold.

Does all this mean the city of today will be a ghost town tomorrow? Possibly, unless city officials act **now.** The time is long past for nostrums or pain-killers. Our cities need cures, not remedies. One-way streets, tricky traffic lights, parking meters, involved cloverleafs, and the like are good as far as they go. However, they just deal with the effect. City officials must remove the cause.

Traffic congestion is nothing new. Two thousand years ago, the streets of Rome were so snarled with traffic that the emperor of the time banned all except government chariots from the Forum area. Records don't tell us how effective the ban was, or how the Romans reacted to it.

During the reign of Louis XV it was fashionable for the noble women to drive their own carriages through the streets of Paris. However, it was soon apparent that milady's place was in the **salon** and not in the driver's seat. Accidents steadily mounted and congestion became almost intolerable. So Louis and his ministers decided to do something about it.

They forbade all women under 30 years of age from driving. The results were most gratifying: all

women ceased driving since none would admit she was over 30!

Today's congestion problems are caused by the private automobile. Years ago, the city was small. Industries were simple, business was leisurely and the tempo of the community was unhurried.

Overnight all this changed. The auto brought with it new ideas. Buildings, cramped for space on the ground, began stretching skyward. Mills became mighty factories turning out machines of peace and, sadly enough weapons of war.

Commerce was now geared to horsepower, not the horse. Whirling dynamos played the tune, and the American people got into step.

But this automotive revolution did not change city streets. The streets of the big city and the streets of the little town remained the same. Instead of being made over they were macadamized. As more and more cars were pumped into downtown areas, slowly the arteries began to harden.

And today, the average vehicle speed in congested streets is three miles an hour—seven miles an hour slower than Old Dobbin used to go!

Many Americans, especially those who live in and around cities, accept the ever-increasing trend to the suburbs as a matter of course. Traffic engineers and city officials, on the other hand, do not treat it so lightly. Charles M. Noble, New Jersey State Highway engineer, feels that if this exodus isn't curbed, "stagnation, decay and finally bankruptcy" will result. He stated not long ago: "Investment in buildings, industrial plants, homes, parks, schools, water supply and all improvements which make up modern metropolitan areas run into billions of dollars. To jeopardize this high investment is unthinkable."

Guy Hecker, Executive Manager of the American Transit Association, reminded city officials recently that they must face the sad fact that "remedies used to ease the traffic problem have not worked." Despite the tremendous sums ladled out in the past, he added, traffic congestion still continues to cripple the lifestream of the cities.

Is there an alternative? Yes, say city planners. They sum it up this way: "Cities must encourage moving people not vehicles. In other words, people must be wooed into riding by transit instead of by private auto on car-choked city streets. The argument is backed up by some convincing figures. The average auto, according to a national survey carries only 1.7 persons. This means that two-thirds of the available auto space is going to waste. Twenty-nine cars, therefore, are needed to carry but fifty persons. These 50 people could all be carried in one public transit vehicle; whereas a person in a moving auto takes up 500 feet of street space, the same person in a moving bus, trackless trolley or streetcar uses but 70 square feet.

But vast engineering projects make the city alluring to the motorist. Broad, straight highways lead into downtown sections; tunnels snake beneath rivers, emerging in the heart of business and financial districts; and bridges whisk motorists to the city shores quickly and conveniently. As a result, cars pour into the city like ants lured to a honey pot!

What should be done, post signs at the outskirts of every city saying "This Municipality Closed to Pleasure Driving?"

Hardly. Such a law would incur the wrath of autoists and auto clubs from coast-to-coast.

Many motorists ask: "Why don't cities build more garages and parking lots?" The answer is that there is little space available for such construction. That which is available usually is prohibitively priced. In cities where downtown property has been turned over to parking concessions, the actual number of cars which can be accommodated makes but a meager dent.

San Francisco has long been badgered by traffic snarls and inadequate public transit. Shortly, both may be things of the past. The citizens can be given credit for attempting to wipe-out the city's congestion. About a year ago, San Franciscans were asked to vote "yes" or "no" whether they wanted a 20-million-dollar transit modernization

Recognized Everywhere!
IT'S HAWS FOR HIGHEST QUALITY
• Best Materials
• Finest Workmanship
• Trouble-free Valves and Fittings
• Complete Sanitation
Write today for '49 HAWS Catalog.
Specify HAWS—and be sure!
HAWS
SANITARY DRINKING FOUNTAINS
ELECTRIC WATER COOLERS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

program put in the works. The ballots showed they wanted the program—overwhelmingly.

The city is now in the process of buying 411 trackless trolleys, 55 streamlined streetcars and about 200 motor buses. Some day, soon, San Francisco residents will be riding from the waterfront to the top of Russian Hill in up-to-date, comfortable transit vehicles.

Here's what Walter H. Blucher, top-flight planning engineer and Executive Director of the American Society of Planning Officials has to say about traffic congestion:

"Now, the plain fact is that too much of our thinking in terms of highways is emotional. The plain fact is that we have been thinking too much in terms of automobiles, rather than in terms of human beings. It is still people who buy groceries, handkerchiefs, nylon hose and mink coats (after the mink gets through wearing them). Judging from some newspaper stories, the attitude of most automobile drivers is that pedestrians are a damned nuisance, and the hunting season for pedestrians is always open and extends throughout the year.

"I am willing to stake my reputation on the forecast that the building of expressways will not solve the traffic and transportation problems of any community. They will, in my opinion, increase the traffic problem and the parking problem, and they will, in my opinion, in a number of communities, encourage the decentralization of the central areas.

"There has been too much thinking about the movement of automobiles rather than the movement of human beings. We could eliminate a great deal of that movement through the proper replanning of our cities. We could facilitate that movement through improving mass-transportation facilities if we give mass transportation a chance, but nowhere are we doing that. We insist upon better mass-transportation facilities, while we are at the same time spending public funds to provide competitive facilities which makes improved mass transportation impossible. I am convinced that from the standpoint of the public, the street car is still a useful instrument for the movement of people, and in some instances is the best vehicle for the movement of people, but few transit companies can afford to operate street cars these days. cient and attractive too. In the field of surface transit, manufacturers of silent electric trolley coaches are making big strides. This newest of public vehicles has always won favor because it is quiet and does not produce objectionable engine fumes. Many of the coaches that serve Atlanta, for instance, are completely air-conditioned. In Cincinnati, FM radios, designed to bring the transit rider music while he travels, have been installed. In other cities, the builders have installed really high standee windows, so that the straphanger won't have to stoop to see his stop.

The seats in some coaches are upholstered with Velon, a special plastic fabric that is long-wearing and decorative. Even the raucous signal buzzer has given way to melodious chimes in many trackless trolleys.

While such improvements in transit vehicles have been a long time coming, they bid fair to make riding in the future more pleasant.

If our cities were flexible affairs, easily adaptable to changing population habits, they could be remolded to accommodate the vast influx of autos. But streets can't be widened and buildings shoved here and there at the whim of a city planner.

This means traffic—the lifeblood of our cities—must be made to flow through the streets as they are laid out today.

Traffic congestion can be eased by greater use of mass public transit facilities, now and at a lower cost than in any other manner.

...quality is well worth considering
Soulé
SS-104
Steeline
TRADE MARK
UTILITY
IF you want low cost for a longer time!
Buildings
Sold by..
SOULÉ STEEL CO.
1750 Army Street • San Francisco 24
Phone: VAlencia 4-4141
80' x 160' for LE ROI BIX CO., LOS ANGELES
UNLIMITED SIZES
UNLIMITED ARRANGEMENTS
A PRODUCT OF SOULÉ STEEL COMPANY • San Francisco • Los Angeles • Portland • Seattle

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

PASADENA CHAPTER

A.I.A. Field Secretary John W. White Jr. attende the May meeting and discussed the services the Institute available to architects through th unification program.

"There are now many new features which ar beneficial particularly to the younger members, White pointed out, "including such items as hand book aids, specification work sheets, and technic data sheets prepared in cooperation with th Producers' Council."

Accounting, awards, business procedures an architectural education are also receiving co siderable attention by the Institute, with benefici results to the architects.

* * *

NEW MEMBERS: Robert E. Langdon Jr. an Pierre Woodman, Corporate Members; Ward Helman, Junior Associate; and Carl C. McElv member transferring from the Southern Californ Chapter.

CHICAGO ARCHITECT AND PLANNER TO STUDY HOUSING IN EUROPE

Ernest A. Grunsfeld Jr., internationally know architect, planner and housing expert, is in Euro making an intensive study of housing, particular the development of city planning techniques, ge eral design of detailing units, developments in si planning, method of handling utilities, types heating, social and economic terminations pe taining to tenancy, cooperative housing, use

materials and housing design.

Grunsfeld has been active in A.I.A. and at present is governor of the Metropolitan Housing and Planning Council, Chicago, and is also a director of the Public Housing Association.

CALIFORNIA ARCHITECT SPEAKS STORE MODERNIZATION SHOW

Nineteen recognized authorities, including retailers, bankers, economists, architects, store planning consultants and store equipment manufacturers will participate in the 3rd Annual Store Modernization Show, in New York City, June 19-24.

Topics to be discussed include layout and traffic, lighting and color, displays and fixtures, store fronts, and planning and budgeting.

Among the speakers to appear on the program is Victor Gruen, architect of Los Angeles, who will discuss "Displays and Fixtures."

WASHINGTON STATE CHAPTER

Reports of Chapter activities during the past year highlighted the June meeting which was held in the Washington Athletic Club, Seattle, on June 2.

A request for cooperation in developing information and material on earthquake damage was received from A. L. Miller, professor of Mechanics and Structures of the University of Washington. Miller is the Northwest member of the Advisory Committee on Engineering Seismology, agency of the seismological field survey of the U. S. Coast and Geodetic Survey.

* * *

The annual A. I. A.-Producers Council "Field Day" June 16 was a tremendous success. The Olympic View Golf and Country Club offers an excellent place for this annual get-together of construction industry interests.

* * *

New Members: John S. Detlie, Robert E. Dudley, Arnold G. Gangnes, James M. Klontz, John T. Ridley and Robert H. Wohleb have been elected Corporate Members. James C. Gardiner, J. C. Lounsbury, Robert G. Price and Robert G. Reichert have been elected Associates, and R. H. Egan and T. Gordon Peterson have been accepted as Student Associates.

A. I. A. SCHOLARSHIP GRANT FOR CITY PLANNING STUDY

A. Whitney Murphy, architect of Butler, Pa., has undertaken a five month survey of the extent and need for city planning in American cities under 50,000 in population, working with funds supplied by an Edward Langley Scholarship grant of the American Institute of Architects and a William Wirt Winchester Fellowship conferred by the Yale

(See Page 38)

STORE FIXTURES

by MULLEN

in ROOS BROS. SAN JOSE BUILDING

Show Window Backgrounds of Bleached Oak

Complete Fixture Installation on Main Floor of Ash veneer panelling and Ash planking

Complete Fixture Installation on Fourth Floor of Birdseye Maple

Manufactured and Installed by

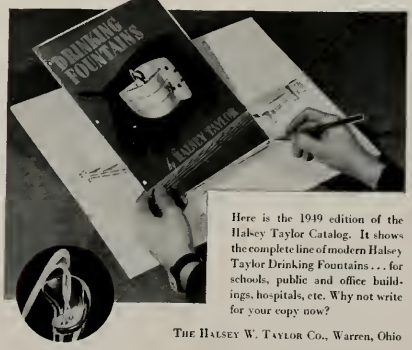
MULLEN MANUFACTURING CO.

Office and Factory

60-80 RAUSCH STREET • SAN FRANCISCO

Telephone UNderhill 1-5815

Now off the press



Here is the 1949 edition of the Halsey Taylor Catalog. It shows the complete line of modern Halsey Taylor Drinking Fountains . . . for schools, public and office buildings, hospitals, etc. Why not write for your copy now?

THE HALSEY W. TAYLOR CO., Warren, Ohio

Halsey Taylor

DRINKING FOUNTAINS

A-3

West Coast Plant, Redlands, Calif.

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E.
San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Harry W. Bolin, President; E. C. Hillman, Vice-President; Robert Short, Secretary-Treasurer. Directors: S. B. Barnes, Lewis Osborne, John Case, Harold P. King, and Donald F. Shugart.
Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS

The semi-annual meeting of the American Society of Heating and Ventilating Engineers, held this month in Minneapolis, covered the all-important subjects of human tolerance limits for extreme heat; solar heat transfer; air distribution, radiant heat, hospital heating and air conditioning; and the heat pump.

Alfred E. Stacey Jr., president, announces that the report on man's ability to tolerate extreme heat will be made by W. V. Blockley, research associate, and Craig L. Taylor, associate professor of the department of engineering, University of California.

Discussions on the subject of the Heat Pump were led by C. E. Graham, building engineer of the Equitable Building, Portland, Oregon; J. Donald Kroeker, consulting engineer, and R. C. Chewning, engineer, both of Portland, Oregon.

PREVENT FIRES and EXPLOSIONS
Caused by EARTHQUAKES!

Plus a Manual Control For Other Emergencies!

SAFETY ENGINEERS and scientists say the Sentinel is the most accurate and dependable earthquake actuated shut-off valve in the world!* On the job 24 hours a day! A record of more than 10 years of reliable service . . . ***proven*** during a period which included two major seismic disturbances.

* Names on request

Indispensable in live seismic regions.
•
Recommended for use with Liquified Petroleum Gases.
•
Thousands installed in the United States.
•
List of installations available on request.
•
Available at leading wholesale plumbing establishments.
•
Indorsed by National Bd. of Fire Underwriters.
•
Leading Fire Prevention Engineers Approve.

Take No Chances . . . Install The
SENTINEL
AUTOMATIC GAS SHUT-OFF VALVE

Designed to shut off automatically when there's an earth shock or explosion sufficient to damage buildings or pipe lines. Listed by the Underwriters' Laboratories and specified by leading architects and engineers for installation in schools, fire stations, factories, theaters, churches, stores, municipal, military and utility buildings. A. I. A. File No. 29-F-6

Write for illustrated folder.

SECURITY VALVE CO.
410 San Fernando Rd., Los Angeles 31, California
Phone CApitol 4191

CARNEGIE TECH

Civil Engineering students at Carnegie Institute of Technology have been cited for their activities during the past year by the American Society of Civil Engineers.

A certificate of commendation "for excellence in the effective and meritorious conduct" was given the student chapter of the A.S.C.E. The school was one of 14 chapters to be honored.

WESTERN ASSOCIATION OF STATE HIGHWAY OFFICIALS

Among the large number of state highway officials attending the 28th Annual Conference of the Western Association of State Highway Officials in Denver, Colorado, this month were a number of West Coast officials and highway executives.

With W. C. Lefebvre, state highway engineer of Arizona, presiding, consideration was given many problems involving engineering, construction, financing, and maintenance.

Appearing on the program were: A. M. Nash, design engineer, California State Highway Department; and Dr. L. I. Hewes, director of the Western Regional Office, U. S. Public Roads Administration.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The regular June meeting of the Structural Engineers Association of Northern California was held in the Engineers Club, San Francisco, on June 7, with the general business consideration being given to the subject of "Gunite Construction."

Joseph H. Darling and Stanley J. Bernhard, re

resenting the EMSCO company of San Francisco, spoke on the subject, while Ted Combs and McGregor Graham of Timber Structures, Inc., spoke on the subject of "Glued Laminated Construction."

* * *

The Annual Picnic, which consists of a full day of golf, baseball, horse-shoe pitching, swimming, barbecue, fun, and "etc."—if nothing else does, the "etc." should interest you—will be held at the Diable Country Club on Saturday, July 16.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Approximately 200 members and guests received a detailed report of the recent earthquakes in Seattle and other cities of the Pacific Northwest, when Harry Bolin, President, told of his personal visit to the area.

Representing the State Architect and the State Department of Architecture, the speaker conferred with building officials of the states of Washington and Oregon, with particular reference to school buildings.

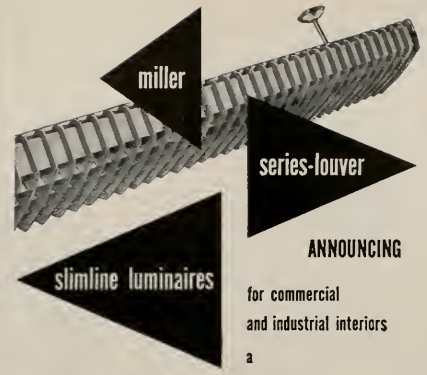
Bolin pointed out that no appreciable school building damage occurred in Oregon although one or two units have been condemned as the result of an awakening realization of the possible danger. In the state of Washington, several communities, particularly those on soft ground, suffered considerable damage to their schools. One interesting side light occurred at a school in Puyallup where the pupils were trained in earthquake drill. When the 'quake started, all the pupils crawled under their seats and remained so until the tremor had subsided even though the stage portion of the auditorium in which they were seated collapsed, and they marched out in an orderly manner. No one was injured. Pictures of the damage to buildings in Long View, Castle Rock, Chehalis and Olympia were shown.

Clyde Durlam of the Los Angeles County Department of Building and Safety reported on the damage that occurred in the soft soil areas in the major cities of Olympia, Tacoma and Seattle.

Buildings affected were mainly in the old sections of the cities with poorly tied masonry walls. The greatest source of danger resulted from falling parapet walls, high unbraced gable walls, and other non-reinforced structures. Mr. Durlam's visit and inspection reaffirmed the county Building Department's desire to eliminate such dangerous elements from structures in Los Angeles County.

R. W. Binder, chief engineer of the Bethal Steel Corporation of Pacific Coast office, also presented his report of the inspection trip. Mr. Binder's tour consisted in the study of the major structures in the area. He brought out, with considerable em-

(See Page 35)



ANNOUNCING

for commercial and industrial interiors a new high in lighting

New flexibility of application of the 96 in. slimline fluorescent lamp. New simplified installation, operation and maintenance. Write for miller slimline catalog 2G.

THE miller COMPANY
SINCE 1904
ILLUMINATING DIVISION, MERIDEN, CONNECTICUT

In HOTELS
HOSPITALS
SKYSCRAPERS
FACTORIES
all over the world!

JOHNSON'S

famous Heavy-Duty 30-AVH Burners

This super-efficient burner uses preheated heavy oils that keep fuel bills low. It is available in 6 sizes and capacities which are adequate for virtually every need that can arise. For all around dependability and economy the 30-AVH has never been surpassed. Heating Engineers the world over, have learned from happy experience that they can count on 30-AVH performance. We recommend it with complete confidence for your consideration on any heavy duty heating job. Ask your nearest Johnson dealer, or write to us direct.

There's a Johnson Oil Burner for every heating need.

....Johnson Oil Burners...

S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Galitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. MacJennett, Mueller Brass Company, 475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

INTRODUCING!

W. R. (BILL) MARSHALL

After graduating from North Carolina State College in 1909, Bill became associated with the Westinghouse Electric Corporation at East Pittsburgh, Pa. In 1910 he was sent to New York, where he spent eleven years. In 1921, he was transferred to Buffalo, N. Y., as District Manager for Northern New York. In 1925, he was transferred to Pittsburgh, Pa., as District Manager in that area. In 1928, he was sent to the Pacific Coast as

Grevstone Studio, Inc., Photo.

District Manager to consolidate the several Western District Offices into one Pacific Coast District. Later was elected a Vice-President representing the Westinghouse Company on the Pacific Coast.

In 1940, Bill resigned from Westinghouse to head up a business of his own, which became ineffective because of the war, but in 1943 he became Executive Vice-President of the Pacific Electric Manufacturing Company of San Francisco.

1946 found him entering into a partnership with Harold W. Squires, as Squires & Marshall, representing the Lyon Metal Products Company and the Unistrut Products Company, which partnership is still in existence.

Bill lives in Hillsborough Oaks, is married, and has one married daughter.

He is a member of the Bohemian Club.

NATIONAL COUNCIL NEWS

Shortages of building materials and equipment have disappeared in the face of a two-year period of record-breaking production, James M. Ashley, president of the Producers' Council, stated recently.

"The distribution of materials has returned to its prewar pattern, and deliveries of virtually all products used in construction can be obtained on reasonably short notice," Mr. Ashley said.

"Retail dealers' inventories are somewhat below the levels maintained before the war, on the average, but delays in construction due to late arrival of materials are a thing of the past.

"It is no longer necessary for builders or contractors to use substitute materials, and there is a wider selection of products available for any type of building than at any time in the past.

"Manufacturers for the most part no longer find it necessary to schedule overtime production, thanks to increased efficiency and the expanded plant capacity added to meet unprecedented postwar demands.

"Although thousands of new and inexperienced workers were added to the building industry's labor force after the war, the quality of workmanship has returned to normal, and the average structure being put up today offers more in the way of conveniences and comforts than ever was true in the past.

"Production of building materials and equipment reached its all-time peak in October, 1948, when it was 61 per cent above the 1939 average and 20 per cent greater than the previous peak attained in 1925."

COMING EVENTS:

Our next regular meeting will be held July 11, and W. P. Fuller Company will be in charge of the program. Sorry we do not have any further information, but we do know it will be an interesting program.

USE QUALITY PRODUCTS — MANUFACTURERS OF QUALITY BUILDING PRODUCTS — PRODUCERS' COUNCIL — CONSULT AN ARCHITECT

WITH THE ENGINEERS

(From Page 33)

phasis, that the newer buildings and the well designed major structures suffered little or no damage. As an example of this, the Smith Building, a 42-story structure, designed to resist a more than 100-mile-an-hour wind, withstood the "quake" with no appreciable distress. Mr. Bender also presented prints taken from seismographs of the U. S. Coast and Geodetic Survey indicating that the epicenter of the earthquake was approximately 15 miles from Olympia where the earth movement was considerably greater than that charted for Seattle which was approximately 45 miles north of the epicenter. The U. S. Coast and Geodetic Survey report indicates that the earthquake was felt as far east as Libby, Montana. They also estimated that the final damage figures will be considerably greater than originally presented by the first reports.

An interesting telegram was read by Mr. Bolin, received from the Northwest, indicating that action will be taken by building officials in that area pertaining to earthquake design of future buildings. The city of Portland does not intend to change their building code to comply with the new requirements in this field. The city of Tacoma had intended, even before the earthquake, to adopt the new uniform code incorporating earthquake precautions. Seattle also requires earthquake design. It is quite interesting to note that the Pacific Northwest is stepping in line with California laws recognizing the necessity of proper design to reduce building hazards and damage.

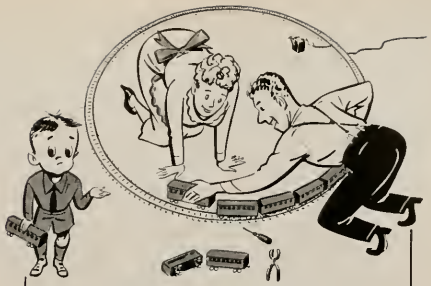
A welding symposium panel with all members of the group invited to join into the discussion after the lead-off talk by panel members was recently held with the following parties covering the field indicated:

Mr. Ralph Cutler, Southwest Welding & Manufacturing Company: Introduction, Outline of Subject; Professor Bill Bobish, California Institute of Technology: Design; Mr. Hugo Hempke, welding and metallurgical engineer and member of American Welding Society: Metallurgy and Inspection; Mr. Charles Orr, Consolidated-Western Steel Corporation: Fabrication; and Mr. Charles Corbit, A.I.S.C.: Moderator.

Some highlights of the discussion included the following:

Welding is now an established technique in structural work. It will continue to be used on a large scale, at least until a new and better substitute for connecting two pieces of steel is found. The engineer who is going to use welding must design for welding. He must be familiar with weld-

(See Page 38)



DANGER—

Overloaded Circuit!

Junior's learning the annoyance of an overloaded "circuit"—and he's about to "blow a fuse."

Electric circuits in a home can become overloaded, too, with the increased power demands of today's electric living. Lights blink, appliances become "lazy," power is wasted and fuses blow.

Make sure there are enough circuits in the homes ***you*** build by specifying ***Certified Adequate Wiring*** in the plans. It's good business for you . . . now and in the future.

See your local utility for free help in planning wiring layouts.

●

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street, San Francisco 3

QUALITY building material
COSTS YOU LESS

E. K. WOOD LUMBER CO.

SAN FRANCISCO General Offices: No. 1 Drumm Street
LOS ANGELES Office and Yards: 4710 S. Alameda St. — JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St. — KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK

Specify it in your home
Available through Lumber Dealers

LOS ANGELES
601 W. 5th Street
Phone Michigen 6294

SAN FRANCISCO
333 Montgomery Street
Phone DOuglas 2-3883

J.H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.

HEADLINE NEWS & VIEWS

By E. H. W.

"WITH over $400-million in total construction costs approved under the Hospital Survey and Construction Act since its passage in 1946, the United States is embarked on the most comprehensive hospital construction program attempted by any nation.":—Geo. L. Read, Chief Const. Engineer, Div. of Hospital Facilities, U. S. Public Health Service.

* * *

"AN informed people acts with knowledge and reason.":—Earl O. Shreve, Pres. Chamber of Commerce of the U. S.

* * *

"THE scope and magnitude of the job with which we are confronted at this critical time in history of our industry is appalling.":—Rodney M. Lockwood, Pres. Nat. Ass'n of Home Builders.

* * *

WHEN the 1949 home building program gets fully under way in the spring, builders will find an adequate supply of plumbing fixtures available, predicts the Plumbing and Heating Industries Bureau.

* * *

HOMES under construction in Los Angeles county are down 50% over the same period of last year, while similar construction in the San Francisco Bay area for the same period of time shows a decrease approximately 16%:—U. S. Department of Labor.

* * *

THE current trend of U. S. industry to swing into diversified realms of activity is regarded by progressive business leaders as highly beneficial to both the country and to industry:—Reynolds Knight, "Behind the Scenes in American Business"

* * *

"ALL architecture which calls itself modern is not necessarily good modern architecture":—Esmond Shaw, Prof., Cooper Union Art School.

* * *

AMONG the most significant "dollar stretchers" developed by the plumbing industry in recent years are four types of corrosion-preventive methods (deactivation, deaeration, self-healing films, and sacrificial metals) for the checking and prevention of corrosion, according to the Plumbing and Heating Industries Bureau.

IN THE NEWS

ARCHITECT MOVES

Joseph Allen Stein, architect, has moved his offices to 45 Maiden Lane, San Francisco, for the general practice of architecture.

GRAMMAR SCHOOL

The Hayward Elementary School District has awarded a $93,864 contract to W. Vernon Bernard, Oakland, for the construction of a 4-classroom, kindergarten, library, and toilet addition to the Baywood Grammar School. Anderson & Simonds, Oakland, are the architects.

BONDS DEFEATED

A bond issue to raise $150,000 for the remodel and construction of a new branch library in Palo Alto was recently defeated by the voters of that city.

HIGH SCHOOL ADDITION

The Spears Construction Co. of Modesto has been awarded a $55,675 contract for a 4-classroom addition to the Escalon High School. Koblik & Fisher of Sacramento are the architects.

BROADWAY GRAMMAR SCHOOL

Nielsen & Nielsen, San Jose, have been awarded a $148,649 contract for the construction of a 3-classroom addition to the Broadway Grammar School, same city. Kump & Falk, San Francisco, are the architects.

SCHOOL BONDS

Voters of Livermore, Alameda county, have approved a bond issue of $326,000 with funds to be spent for new grammar schools.

SHINGLE SIDEWALL CONSTRUCTION

The double-coursed method of shingle sidewall construction is an interesting development in building construction of residences and offers beauty, great strength, durability, long life and a high insulation factor.

Cedar Walls distributed by the Sidewall Lumber Co. are manufactured for use in this application.

It produces the charm traditional with cedar shakes and the modern trend in home architecture.

Pre-stained red cedar shingles can be applied tight against one another and conform to code requirements.

STORE BUILDING. A contract has been awarded A. A. Douglas of Napa for the construction of a 1-story building in Napa at a cost of $24,497. Ed. R. French Jr. is the architect.

FACTORY ADDITION. Donald Whalin of Oakland has been awarded a $38,000 contract for construction of an addition to the Uniden Calculating Machine Company factory in San Leandro. F. H. Reimers, San Francisco, is the architect.

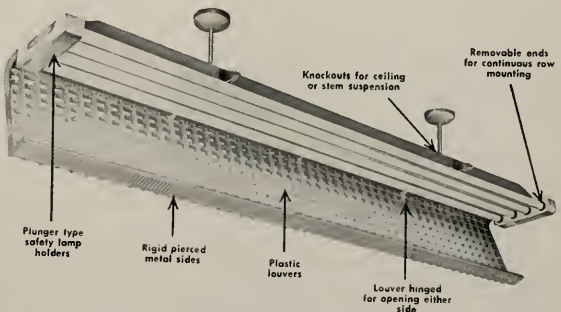
OUTSTANDING!

SMOOT-HOLMAN'S

New

CONSTELLATION

SLIMLINE FLUORESCENT


Removable ends for continuous row mounting
Knockouts for ceiling or stem suspension
Plunger type safety lamp holders
Rigid pierced metal sides
Plastic louvers
Louver hinged for opening either side

This outstanding luminaire utilizes the brand new high output 75 watt, 425 m. a. T-12-96" fluorescent lamp. It is scientifically engineered to produce the utmost in lighting quality and efficiency.

WRITE FOR CIRCULAR

SMOOT-HOLMAN COMPANY
SMOOT-HOLMAN
INGLEWOOD CALIFORNIA
MADE IN U.S.A.

Offices in Principal Western Cities—Branch and Warehouse in San Francisco

CLINTON
CONSTRUCTION CO.
OF CALIFORNIA

General Contractors

923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CEDARWALLS
WONDER-COTE PROCESS
Red Cedar Shingle Sidewalls
9 attractive colors and white.
Machine grooved and carton packed at Factory.
Write for Name of your Local Dealer
SIDEWALL LUMBER CO.
1994 Oakdale Ave. San Francisco 24 ATwater 2-8112

A.I.A. ACTIVITIES

(From Page 31)

University Department of Architecture in 1941.

His research will be conducted with the cooperation of Walter A. Taylor, director of Education and Research of the A.I.A. It is planned to study some 40 cities.

NEW YORK CHAPTER A. I. A. ELECTS KILHAM PRESIDENT

Walter H. Kilham, member of the architectural firm of O'Connor & Kilham, New York City, has been elected president of the New York Chapter of the A.I.A., succeeding Harold R. Sleeper who was in office two terms.

Kilham was identified with architecture on the Daily News Building, Rockefeller Center, Firestone Memorial Library at Princeton, and the new Cornell Library.

Other officers elected included Ben John Small, vice-president; M. Milton Glass, secretary, and William Potter who was re-elected treasurer. Members of the executive committee elected were Harry M. Prince, Harold R. Sleeper, Daniel Schwartzman, Morris Ketchum Jr. and Robert A. Jacobs.

SOUTHERN CALIFORNIA CHAPTER

The regular June meeting was devoted to the subject of "Progress," with Progress in Architecture being exemplified by this year's Honor Award Competition and an exhibit of the work.

Speaker for the occasion was John Anson Ford, supervisor, of the City and County of Los Angeles, Board of Supervisors, and a man who has been a vital force in the development of the cultural interest of southern California.

WITH THE ENGINEERS

(From Page 35)

ing practices and with welders in order to create an economical structure. He must know their limitations and their best applications, and he must adapt his designs to them. The structural designer should keep abreast of the latest developments in a rapidly advancing field in addition to maintaining a knowledge of rigid joints, stress concentrations, temperature stresses and deformation, built-in stresses, plastic yield and residual stresses. The construction engineer must be completely acquainted with the welding processes and types of rod. He must now be able to spot a poor weld and he must be familiar with the latest inspection and testing requirements such as welder qualification tests, magna-flux tests and radio-graphic (X-ray) tests, although visual inspection is the most satisfactory to date.

(See Page 43)

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

THEATRES & AUDITORIUMS. By Harold Burris-Meyer and Edward C. Cole. Reinhold Publishing Corp., 330 W. 42nd Street, New York. Price $8.00

This new book provides a basic understanding and complete details of planning a theatre; staging a theatrical production, and handling of many technical details. Architecture, design, and specific problems are studied so that theatres and auditoriums may be more intelligently planned.

The book undertakes to derive plan, size, shape, arrangement and equipment from an analysis of function and employs critical and constructive comment. The book contains many illustrative sketches selected to emphasize features seldom understood by a person unfamiliar with theatrical processes.

Harold Burris-Meyer is Associate Professor and Director of Research of Dramatic Arts and Sound in the Theatre at Stevens Institute of Technology, while Edward C. Cole is Associate Professor and Production Manager of the Drama Department at the School of Fine Arts, Yale University.

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

106. STEEL WINDOWS & DOORS (WITH HARDWARE)

New 28 page catalogue by Detroit Steel Products Company entitled 'Fenestra Stock Products'; the manufacturer pictures and describes steel windows and doors complete with hardware, that are carried in stock by local dealers for quick delivery. Installation details, typical applications, stock types and sizes are shown for residences, schools hospitals and office buildings; security pivoted and commercial projecting windows for stores, commercial and industrial buildings; also metal swing slide doors and frames, 1949.

107. LIGHTING FOLDER

The Miller Company, Meriden, Conn., has issued an 8-page catalog-folder illustrating and describing the new Miller Series —Louver Slimline Luminaires for commercial and industrial interiors. These luminaires are designed for use with 96-inch Slimline fluorescent lamp; are a semi-direct type with sufficient light to eliminate undesired contrast between luminaires and ceiling. The folder gives dimensional details and illumination performance in various size areas. Sec. 2G— 5/10/49.

108. INSULATING PLASTER AGGREGATE

New illustrated brochure on properties and uses of Permalite —new insulating plaster aggregate—now available from Great Lakes Carbon Corporation. Shown in the 6-page folder are specifications, technical data, instructions for use and other facts useful to plasterers, contractors, builders and architects. A.I.A.—21-A17. 5/25/49.

109. INTERCOMMUNICATING PHONE SYSTEMS

The Auth Electric Company has released Bulletin No. 155 on Intercommunicating Telephone Systems. The booklet printed in black and white has specification and diagram material. A.I.A. —31-I-5, 20 pages illus. 8/47.

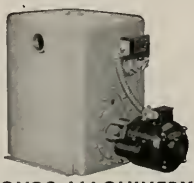
ARCHITECT AND ENGINEER.
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

106 107 108 109

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after July 15th.—A. & E.)

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco GArfield 1-7755
2215 El Camino Real, San Mateo S. M. S-0687
304 Bryant Street, Palo Alto P. A. 3373
2610 The Alameda, Santa Clara S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles THornwall 4196
MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT
Pumping Machinery for Every Purpose

For Service Call DOuglas 2-6794 or MUtual 8322
SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO Phone SUtter 1-6747
3522 COUNCIL STREET (Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF. Telephone Fairfax 7834
PROUD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer
REPUBLIC STEEL
See Sweet's Catalog File or write us for full information.
REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO
DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.

SAN FRANCISCO, CALIF. HEMLOCK 4100

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS

Published Daily

The ARCHITECT and ENGINEER, Inc.

68 Post Street, San Francisco - DO 8311

PRESIDENT A.I.A. HAILS BUILDING INDUSTRY

(From Page 10)

expressed ideas that the building industry lags behind, that it does not use modern methods—and in relation to the automobile industry, how does it actually stack up?" Answering his own question, he said:

"The automobile has been a part of our life since the beginning of the century. It is still badly designed, costs too much, and takes too large a proportion of the national income in relation to its use, both in the car itself and on the roads which subsidize its far-reaching influence. There have been many articles recently decrying its size, both in relation to the number of passengers carried and the area of the street occupied in motion and in parking; the stupidity of its streamlining; the lack of space comfort within; the death toll due to inadequate vision (now being slowly improved); the inaccessible and too complicated engine.

"Yet in fifty years more money in research has been spent upon this so-called marvel of the machine age than perhaps any other individual factor of our civilization other than war . . .

"This product rolls off an assembly line on its own power to a subsidized highway which costs each car owner a yearly fraction in taxes for its use . . . but where is the $500 car about which we have been hearing for so many years? Where is the $750 car which would be in relation to a $7,500 house—a house possible today in many parts of this country . . .

"Of course, you can buy a $750 car—a fourth or fifth-hand jalopy well on its way to become a car slum. You know, there are car slums, just as there are housing slums. And further, amazingly enough, considering the acclamation of the car's achievement as the success of the machine age, there are people who cannot afford any kind of motor car, and even unfortunately, the most desperate kind of shelter.

"One does not need to speak of the marvelous efficiency of the building industry in building the counterpart of the auto, i.e., the skyscraper, the large scale factories, the great housing projects where there is the same kind and quantity of material flow in component parts as found in the automobile industry. For the builders, however, the material comes to the inside of cities, along narrow streets already congested by normal needs and traffic of the city.

"There we see these great enterprises accomplished with celerity—with dispatch—with very little interference to normal city life. Very few industries in the world could have built the skyscrapers on lower Manhattan, for example, with

(See Page 43)

A.I.A. PRESIDENT HAILS BUILDING INDUSTRY

(From Page 40)

the speed and lack of annoyance as developed by the building industry."

Walker concluded his address with a strong appeal to all segments of the building industry—design, management and labor—to meet increased demands for social needs with imagination and willingness to produce at reasonable cost.

"It is perfectly obvious", he asserted, "that we are as efficient as is the society in which we work and the fact that we have solved as much as we have makes it difficult to achieve a continuing enthusiasm for a new goal of achievement. It is all the more necessary that we attempt to complete our job not only to ensure the social welfare of all our people but also to combat the new religion of despair and phony equality. We must either work to raise real living standards or as (Winston) Churchill says, starve equally."

WITH THE ENGINEERS

(From Page 38)

Welding sequence is of utmost importance, both in joints and in structures, and the best solution is probably that of cooperation between structural engineers and fabricators. The steel contractors require more complete drawings and details from the engineer with welded construction, but they in turn are turning more and more to engineers to interpret structural drawings and to set up and organize their shop and erection work.

The new developments in welding electrodes, submerged arc processes, welding techniques and welding inspection have advanced structural welding to a position of great importance in the building industry, and the use of this method will undoubtedly continue to increase.

ARCHITECTS APPOINTED TO S.F. ART COMMISSION

Francis J. McCarthy, architect, has been appointed to the San Francisco Art Commission by Mayor Elmer Robinson. He succeeds Paul Ryan who resigned earlier in the year.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to April, 1949.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	Santa Clara	Solano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	3.00	*2.81¼	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.0375	2.0375	2.0375	2.0375	2.1125
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.2375	2.2375	2.2375	2.2375	2.2375
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.00*	2.50*	2.81¼	2.81¼	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.2375	2.2375	2.2375	2.2375	2.2375
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.50*	2.81¼	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.16	2.16	2.16	1.87½	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81¼	2.81¼	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.00	2.67½	2.67½	2.43¼	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

CONSTRUCTION ENGINEER (CIVIL)
GENERAL SUPERINTENDENT
PROJECT MANAGER

wenty five years of wide practical experience on frame, steel, concrete and masonry ildgs. of all types. Estimating, sub-division, les, detailing & specification writing backround. Dependable, energetic. Excellent cal references. Have car. Frea to travel. O. Box 807, San Mateo, Calif.

WANTED: Product Engineer with experience wanted as a permanant addition to the staff of an industrial Development Department located in Minnesota. Work involves product development including travel for consumer contacts. Program relates to products from wood. Submit details education, experience, references, salary requirament, photograph. All replies considered confidential and will ba acknowledged. Reply Box 238, Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

WANTED: Top architectural designer, renderer, draftsman of ability, by long established central western office.

Modern designer with background of historical architecture.

University graduate, European travel and study, or training at American Academy of Rome.

Good background, initiative, diplomatic, pleasing personality.

Prospective future partnership.

Furnish complete information, references. Box 110, Architect & Engineer, 68 Post St.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

COURTLAND, Sacramento Co.: Bates Joint Union Elementary School District, owner; Grammar School addition, kindergarten, $21,350. ARCHITECT: Koblik & Fisher, Sacramento; frame and stucco construction. GENERAL CONTRACTOR: Schutt Construction Co., Sacramento.

CORCORAN, Kings Co.: Corcoran Union High School District, owner; high school addition, $84,526. ARCHITECT: H. L. Gogerty, Los Angeles; 4 classrooms and shop building, light steel frame, reinforced concrete, steel sash, asphalt tile floors, accoustical work; Shop, structural steel and metal exterior. GENERAL CONTRACTOR: Flowers & Shirley, Tulare.

COLUMBIA, Tuolumne Co.: Columbia Elementary School District, owner; bath house building, $17,411. ARCHITECT: Elmore E. Ernst, Stockton; frame construction. GENERAL CONTRACTOR: Warren Young, Sonora.

DENAIR, Stanislaus Co.: Denair Unified School District, owner; new Grammar School, 4 classrooms and toilet rooms, $61,470. ARCHITECT: Frank Wynkoop & Associates, Fresno; concrete block, structural steel and frame construction. GENERAL CONTRACTOR: Spears Construction Co., Modesto.

EUREKA, Humboldt Co.: Eureka Board of Education, owner; Franklin and Jefferson Grammar School additions, re-erection of bus garage, $206,300 and $57,500. ARCHITECT: Masten & Hurd, San Francisco; frame construction. Bus garage, frame and structural steel roof trusses. GENERAL CONTRACTOR: Baldwin, Straub Corp., San Rafael, Franklin & Jefferson School, $206,300; Baldwin, Straub Corp., San Rafael, bus garage, $57,500.

ESCALON, San Joaquin Co.: Escalon High School District, owner; high school addition, 4 classrooms and toilet rooms, $55,675. ARCHITECT: Koblik & Fisher, Sacramento; frame and stucco construction. GENERAL CONTRACTOR: Spears Construction Co., Modesto.

FAIRFIELD, Solano Co.: Bunney Hospital, owner; hospital addition, $32,075. ARCHITECT: Howard G. Bissell, Stockton; offices and treatment rooms, 1 story, frame and stucco construction. GENERAL CONTRACTOR: Claude M. Moorman, Stockton.

GILROY, Santa Clara Co.: Gilroy Elementary School District, owner; Grammar School addition, 3 classrooms, $37,445. ARCHITECT: Kump & Falk, San Francisco; structural steel and frame construction. GENERAL CONTRACTOR: Geo. C. Renz, Gilroy.

HAYWARD, Alameda Co.: Hayward Elementary School District, owner; Baywood Grammar School addition, 4 classrooms, kindergarten, library and toilet rooms, $93,864. ARCHITECT: Anderson & Simonds, Oakland; frame and stucco construction, concrete floor, radiant heating. GENERAL CONTRACTOR: W. Vernon Bernard, Oakland.

HAYWARD, Alameda Co.: Hayward Elementary School District, owner; Grammar School addition, 6 classrooms and toilet rooms, $72,130. ARCHITECT: Anderson & Simonds, Oakland; frame and stucco construction. GENERAL CONTRACTOR: Steadman & Powell, Oakland.

HAYWARD, Alameda Co.: Russell Elementary School District, owner; Grammar School, $144,470. ARCHITECT: John J. Donovan and Ralph N. Kerr, Berkeley; frame and stucco construction, well-tank and pump and septic tank. GENERAL CONTRACTOR: C. R. Hills, San Leandro.

HAYWARD, Alameda Co.: Atlas Imperial Diesel Engine Co., owner; glass factory, office and warehouse building, $220,000. ARCHITECT: Douglas H. McLellan, Los Angeles; 1 story, 113'x160' structural steel frame and corrugated metal walls and roof, concrete floor. GENERAL CONTRACTOR: Larsen & Larsen, San Francisco, $130,000. ELECTRIC WORK: T. L. Rosenberg Co., Oakland, $38,000. MECHANICAL WORK: Fearey Plumbing & Heating Co., Oakland, $52,000.

HURON, Fresno Co.: Coalinga-Huron Union Elementary School District, owner; school addition, $166,951. ARCHITECT: David Horn and Marshall Mortland, Fresno. GENERAL CONTRACTOR: Robert Jolly, Fresno.

MODESTO, Stanislaus Co.: Modesto Board of Education, owner; auditorium building, music building and food classroom unit, $428,548. ARCHITECT: Harry J. Devine, Sacramento; reinforced concrete construction. GENERAL CONTRACTOR: L. A. Hathaway & Co., San Jose.

MODESTO, Stanislaus Co.: Dr. George S. Feher, owner; medical building, $21,273. ARCHITECT: Russell G. DeLappe, Berkeley; 1 story; concrete block and frame construction. GENERAL CONTRACTOR: Acme Construction Co., Modesto.

IVANHOE, Tulare Co.: Ivanhoe Elementary School District, owner; new Grammar School, 9 classrooms, kindergarten, offices and toilet rooms, $173,628. ARCHITECT: Wm. Glen Balch & Louis L. Bryan, Los Angeles; frame and stucco construction. GENERAL CONTRACTOR: Flowers & Shirley, Tulare.

LOS GATOS, Santa Clara Co.: Ivar Siversteen, owner; store building, $9200. ARCHITECT: Gifford E. Sobey, San Jose; 1 story 18'x50' frame construction, redwood and brick veneer exterior. GENERAL CONTRACTOR: Kocker Construction Co., San Jose.

LOS BANOS, Merced Co.: West Side Union High School District, owner; swimming pool, $54,250. ARCHITECT: David Horn & Marshall Mortland, Fresno; reinforced concrete construction, under-water lighting. GENERAL CONTRACTOR: C. Morman Peterson, Berkeley.

MILL VALLEY, Marin Co.: Tamalpais Union High School District, owner; field house, $11,329. ARCHITECT: Kump & Falk, San Francisco; frame construction. GENERAL CONTRACTOR: Zoellner Construction Co., San Anselmo.

MARTINEZ, Contra Costa Co.: Roman Catholic Archbishop of San Francisco, owner; convent building, $86,000. ARCHITECT: J. Clarence Felciano, Santa Rosa; 2 story frame and stucco construction, aluminum sash, gas and hot water heating system. GENERAL CONTRACTOR: B & R Construction Co., San Francisco.

MORGAN HILL, Santa Clara Co.: Medical building, $67,474; ARCHITECT: Higgins & Root, San Jose; 1 and 2 story, 40'x125', frame and stucco construction, air conditioning, rubber and asphalt tile floors. GENERAL CONTRACTOR: E. A. Hathaway & Co., San Jose.

MOUNTAIN VIEW, Santa Clara Co.: Mountain View School District, owner; Girls' Gymnasium, $73,634. ARCHITECT: Birge M. Clark and Walter Stromquist, Palo Alto; frame and stucco construction; some structural steel frame. GENERAL CONTRACTOR: Earl W. Heple, San Jose.

NEWMAN, Stanislaus Co.: Roman Catholic Archibshop of San Francisco, owner; parish hall, $37,149. ARCHITECT: Martin J. Rist, San Francisco; frame and stucco construction. GENERAL CONTRACTOR: Goodenough Construction Co., Stockton.

NORTH SACRAMENTO, Sacramento Co.: Dr. Wm. K. Eaton and Dr. F. A. Bracker, owners; clinic and hospital building, 16 beds, $200,000. ARCHITECT: Erling Olenson, Sacramento; 1 story, 60'x170'; masonry and frame and stucco construction; concrete floors, radiant heating, air conditioning. GENERAL CONTRACTORS: E. L. Schutt Construction Co., North Sacramento.

OAKLAND, Alameda Co.: Mrs. Edythe R. Bonta, owner; residence, $30,500. ARCHITECT: Irwin M. Johnson, Oakland; 1 and 2 story; frame and stucco construction. GENERAL CONTRACTOR: L. T. Leiter Sons, Oakland.

OAKLAND, Alameda Co.: James Roberts, owner; residence, 10 rooms, 5 baths, $45,000. ARCHITECT: J. K. Ballantine, Berkeley; 2 story, brick veneer and frame GENERAL CONTRACTOR: Moore & Roberts San Francisco.

OAKLAND, Alameda Co.: Oakland Board of Education, owner; 7 classrooms, 2 kindergartens and toilet rooms, $187,900. ARCHITECT: Pensford & Price, Oakland; 1 story reinforced concrete construction GENERAL CONTRACTOR: Pacific Co. Oakland.

PACHECO, Contra Costa Co.: County of Contra Costa, owner; new juvenile hall buildings, 4 wings and administration service building, $489,400. ARCHITECT: E. Geoffrey Bangs, San Francisco; 1 and 2 story; reinforced concrete construction GENERAL CONTRACTOR: Haas & Rothschild, San Francisco.

PACHECO, Contra Costa Co.: Pacheco Elementary School District, owner; gramma school addition, $36,884. ARCHITECT: Jack Buchter, Orinda; 2 classrooms, frame and stucco construction. GENERAL CONTRACTOR: Allan Fuller, Walnut Creek.

RICHMOND, Contra Costa Co.: Yates Corp owner; department store building, $250,000 ENGINEER: Bryan & Murphy, Berkeley; story, basement and mezzanine, 75'x180' reinforced concrete and structural steel construction, brick and plate glass fron GENERAL CONTRACTOR: Carl Overaa Co., Richmond.

RICHMOND, Contra Costa Co.: Richmond Board of Education, owner; Pullman Grammar School Addition, $57,411. ARCHITECT Dragon, Schmidts & Hardman, Berkeley frame construction. GENERAL CONTRACTOR: Elmer J. Freethy, El Cerrito.

RICHMOND, Contra Costa Co.: Elks Ha Association, owner; Elks Lodge Buildin remodel, $160,000. ARCHITECT: Chas I Strothoff, San Francisco; 4 story and base ment, interior remodel. GENERAL CON TRACTOR: Carl Overaa & Co., Richmond

RIPON, San Joaquin Co.: Ripon Elementar School District, owner; grammar school addition, 3 classrooms, $38,165. ARCH TECT: Elmore G. Ernst, Stockton; frame an stucco construction. GENERAL CONTRAC TOR: V. A. Nelson, Stockton.

REDDING, Shasta Co.: City of Redding, owner; airport passenger depot, $42,349. ARCHITECT: Wm. G. Merchant, San Francisco; 1 story, 89'x28'; frame construction, concrete floor, composition roof, ticket office, waiting room, lunch room. GENERAL CONTRACTOR: J. P. Brennan, Redding.

SOUTH SAN FRANCISCO, San Mateo Co.: City of South San Francisco, owner; fire house, $32,320. ARCHITECT: Leslie C. Irwin, San Francisco; 1 story, frame construction, redwood exterior, concrete floors, radiant heating, composition roof. GENERAL CONTRACTOR: S & Q Construction Co., San Francisco.

STONYFORD, Colusa Co.: Indian Valley Elementary School District, owner; grammar school, 1 classroom, offices and toilet rooms, $34,784. ARCHITECT: Koblik and Fischer, Sacramento. STRUCTURAL ENGINEER: Arthur Sauer, Sacramento. Frame and stucco construction. GENERAL CONTRACTOR: O'Connor Bros., Red Bluff.

SAN JOSE, Santa Clara Co.: Robert Griffith, owner; apartment building, 50 apartments, $188,605. ARCHITECT: Donnell E. Jaekle, San Jose; 3 story, frame and stucco construction, full concrete basement, garage, 1 automatic elevator, all-metal kitchen cabinets, electric heating, rubber and asphalt tile and carpet floors. GENERAL CONTRACTOR: Kocker Construction Co, San Jose.

SALINAS, Monterey Co.: Appliance store completion, $32,042. ARCHITECT: Chas. E. Butner, Salinas. New store front and completion of interior 1st floor and basement, hydraulic elevator. GENERAL CONTRACTOR: Ed M. Carlsen, Salinas.

SALINAS, Monterey Co.: Alisal Union Elementary School District, owner; Sanborn grammar school. ARCHITECT: W. H. Rowe, San Francisco. Frame and stucco construction. $173,109. GENERAL CONTRACTOR: Leonard English, Santa Cruz.

SACRAMENTO, Sacramento Co.: Sacramento Civic Repertory Theatre Assoc, owner; Eaglet Theatre, $69,803. ARCHITECT: Dwight Gibbs, Los Angeles; brick construction. GENERAL CONTRACTOR: H. W. Robertson, Sacramento.

SAN PABLO, Contra Costa Co.: San Pablo Elementary School District, owner; Riverside grammar school addition; 5 classrooms, kindergarten and toilet rooms, $85,013. ARCHITECT: Dragon, Schmidts & Hardman, Berkeley; frame and brick veneer, tile roof. GENERAL CONTRACTOR: Elmer J. Freethy, El Cerrito.

SAN LORENZO, Alameda Co.: San Lorenzo Elementary School District, owner; new Bockman Road Grammar School, 6 classrooms, offices and toilet rooms, $93,820. ARCHITECT: Dragon, Schmidts & Hardman, Berkeley; frame and stucco construction. GENERAL CONTRACTOR: N. T. Lewis, Hayward.

SAN MATEO, San Mateo Co.: San Mateo Union High School District, owner; girls shower, dressing and locker building, $154,991. ARCHITECT: Kump & Falk, San Francisco; reinforced concrete; structural steel roof trusses, brick veneer, radiant heating. GENERAL CONTRACTOR: Jos. Bettancourt, San Bruno.

SONOMA, Sonoma Co.: Acme Leather Products Co., owner; factory building, $15,000. ENGINEER: August Waegemann, San Francisco; 1 story, 50'x100'; concrete block and frame construction. GENERAL CONTRACTOR: C. C. Bean, Sonoma.

SCOTT VALLEY, Santa Cruz Co.: Scott Valley Union Elementary School District, owner; grammar school, 3 classrooms, kindergarten, office and toilet rooms, $79,712. ARCHITECT: C. J. Ryland Santa Cruz; frame and stucco construction. GENERAL CONTRACTOR: Leonard English, Santa Cruz.

SAN RAFAEL, Marin Co.: Roman Catholic Archbishop of San Francisco, owner; restoration of Mission San Rafael Arcangel, $85,000. ARCHITECT: Arnold Constable, Sausalito; 1 story; reinforced concrete construction; tile roof. GENERAL CONTRACTOR: Robert McCarthy Co., San Francisco.

SAN LEANDRO, Alameda Co.: Lucky Stores, Inc., owner; warehouse and office buildings, $1,500,000. ENGINEER: L. H. & B. L. Nishkian San Francisco; 1 story, 160,000 sq. ft.; office 15,000 sq. ft. Reinforced concrete construction, will have auditorium, cafeteria, recreation room, kitchen and food pre-packaging building, truck repair shop, refrigerator, vegetable storage etc. GENERAL CONTRACTOR: MacDonald, Young & Nelson, San Francisco.

STOCKTON, San Joaquin Co.: Stockton Board of Education, owner; August Grammar School, 8 classrooms, kindergarten and toilet rooms; Harrison Grammar School, 8 classrooms, kindergarten and toilet rooms, $246,436. ARCHITECT: Victor Galbraith, Stockton; frame and stucco construction, concrete floors, asphalt tile floors, GENERAL CONTRACTOR: Moore & Moore Construction Co., Stockton.

FRESNO, Fresno Co.: County of Fresno, owner; county general hospital, boiler plant and electric work, $124,117. MECHANICAL ENGINEER: Clyde H. Bentley, San Francisco. MECHANICAL WORK, Frank Hudson Inc., $68,622. ELECTRIC WORK: Jeffery Electric Construction Co., $55,555.

FRESNO, Fresno Co.: City of Fresno, owner; air terminal building remodel, $74,000. ARCHITECT: Philip S. Buckingham, Fresno; GENERAL CONTRACTOR, Lloyd D. Hibner, Fresno.

ALWINTITE

Aluminum Double-Hung Windows for Residental Construction ...embody many exclusive, patented features formerly found only in expensive, custom-built windows

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Where to plan portable telephones in new homes

Thoughtful builders plan outlets for portable telephones for rooms used occasionally or at certain seasons—like basement playrooms and glassed-in porches. But they provide for permanent outlets in rooms where customers spend most of their time. Built-in conduit and outlet boxes make it simple to add portable and permanent telephones later.

Attractive walls are never marred by exposed wiring when you plan built-in outlets and conduit. These facilities for concealed wiring are easy to install during construction and means customer-convenience at a very low cost. For free help in planning, call your local Pacific Telephone office and ask for "Architects and Builders Service."

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

IN THE NEWS

SCHOOL CONTRACT

The Russell Elementary School District, Hayward (California), has awarded a $144,470 contract to C. R. Hills of San Leandro for the construction of a frame and stucco Grammar School near Hayward.

John J. Donovan and Ralph N. Kerr of Berkeley are the architects.

NEW CHURCH

The First Congregational Church of Fresno has awarded a general contract to Larsen-Ratto Construction Company, Fresno, for the construction of a $101,082 new Church building in Fresno.

David Horn & Marshall Mortland of Fresno are the architects.

ICE CREAM

A general contract has been awarded to Chas. Guth of Sacramento for the construction of a $31,486 ice cream factory building in Sacramento.

Koblick and Fisher of Sacramento are the architects.

GIRLS GYM. Earl W. Heple, San Jose, has been awarded a $73,634 contract for the construction of a frame and stucco Girls Gymnasium building at the High School in Mountain View. Brige M. Clark and Walter Stromquist, Palo Alto, are the architects.

PARSONAGE. A. L. Miller, Sacramento, has been awarded a $77,358 contract for the construction of a frame and stucco Church and Parsonage building in Sacramento for the Calvary Baptist Church, Herbert E. Goodpastor, Sacramento, is the architect.

AUTO AGENCY: McDonald, Young & Nelson, San Francisco contractors, have been awarded a contract for the construction of alterations to the Cadillac Motor agency in San Francisco.

SCHOOL ADDITION: A. E. Erickson & Son, North Sacramento, was awarded a $61,580 contract for the construction of an addition to the Dos Rios Grammar School. Koblick & Fisher, Sacramento, are the architects.

TEMPORARY CLASSROOMS: C. F. Parker, San Francisco, has been awarded a $96,976 contract for the erection of temporary portable pre-fabricated frame classrooms for the Double Rock School in San Francisco.

OFFICE AND WAREHOUSE: Harry K. Jensen, Oakland, has been awarded a $61,487 contract for the construction of a 2-story office and warehouse building in Oakland. Irwin M. Johnson, Oakland, is the architect.

SWIMMING POOL

The City of Rio Vista, California, has awarded a contract for the construction of a swimming pool and bathhouse to C. Norman Peterson of Berkeley, in the amount of $52,250.

EXHIBIT BUILDING

The Midstate Construction Company of San Francisco, has been awarded a $144,333 contract for the construction of a group of exhibit buildings for the agricultural district fair at Petaluma. Floor area is approximately 48,400 sq. ft.

BLEECHERS

The San Luis Obispo State Polytechnic College has awarded a $48,600 contract to the Laino Construction Company of San Luis Obispo, for the construction of steel bleechers at the athletic field. Floors will be of concrete.

GRAMMAR SCHOOL

Harold E. Peterson, Sacramento, has been awarded a $96,897 contract for the construction of a 6-classroom, office and toilet room Grammar School near Roseville in Sacramento county.

Chas. F. Dean, Sacramento, is the architect.

DRIVE-IN

The A. E. Erickson & Sons Construction Company of North Sacramento has been awarded a $40,000 contract for the construction of a Drive-In Restaurant in Sacramento.

CHEMISTRY BUILDING

E. S. McKittrick Company, Oakland, has been awarded a contract for the construction of a 1-story concrete block and frame organic Chemistry building on the Stanford University Campus at a cost of $184,669.

Eldridge T. Spencer and Wm. C. Ambrose, San Francisco, are the architects.

STOLTE INC.

General Contractors

—:—

OAKLAND · CALIFORNIA

STATIONERY
SCHOOL & OFFICE
SUPPLIES

•

Printing Engraving
Announcements

•

CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

CRITICAL CLIENTS PREFER—
CABOT'S COLLOPAKES

32 Lively Colors — No Adulterants Are Used

CABOT'S patented COLLO PAKING process results in a durable, Porcelain-Smooth Surface—Stays Clean—Resists the elements for years.

Write for color card, showing 32 colors.

GUNN CARLE & CO
20 POTRERO AVENUE · SAN FRANCISCO, CALIF.

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO - SACRAMENTO
OAKLAND - LOS ANGELES - DENVER

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

GRAMMAR SCHOOL

The Stockton Board of Education has awarded a general contract to the Moore & Moore Construction Company of Stockton for the construction of a frame and stucco 8-class room Harrison Grammar School building in Stockton to cost $246,436.

Victor Galbraith, Stockton, is the architect.

GYMNASIUM

The Roman Catholic Bishop of Reno, Nevada, has awarded a $55,776 contract to the Walker Boudwin Construction Company of Reno for the construction of a structural steel frame and aluminum exterior Gymnasium Building at the Manague Parochial High School in Reno.

Russell Mills, Reno, is the architect.

AUDITORIUM

The L. A. Hathaway & Company of San Jose has been awarded a $428,548 contract for the construction of a new Auditorium, Music Building and Food classroom unit of the Modesto High School. Structures to be of reinforced concrete construction.

Harry J. Devine, Sacramento, is the architect.

CARPENTERS UNION BUILDING: L. A. Bilderback & Sons, San Rafael, have been awarded a $45,000 contract for the construction of a 1-story Carpenters Union Building in San Rafael.

RED DEVIL

Streamlining rather than sacrificing weight of floor pressure, capacity of motor, or size of brush, the new RED DEVIL FP11 floor polisher is made of cast iron, with the motor centered over the brush.

Revolving at 300 RPM the 10" brush, with 11" bristle spread, produces balanced floor pressure. White rubber bumper prevents soiled base boards. Available in several colors. Complete information from manufacturer RED DEVIL TOOLS, Irvington, New Jersey.

SMILAN PORTABLE ELECTRIC TOOL

A new multi-purpose, portable electric tool for maintenance men, carpenters, plumbers, electricians, garages, and aircraft factories has been announced by the SMILAN TOOL CO., 2848 West Pico Blvd., Los Angeles.

Used for drilling, sawing, filing, sanding, polishing and buffing on wood or metal; operates on 110 volt AC-DC motor with trigger switch. Complete information on this new low cost tool available from manufacturer.

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING • PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard

Interior Trim — Gutters

Special Moldings

The place to SAVE

is

LUMBER MANUFACTURING CO.

225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

Brownskin
VAPORSEAL
The resilient building paper creped to S-T-R-E-T-C-H
Quality Products Since 1895
ANGIER PACIFIC CORPORATION
55 NEW MONTGOMERY ST. SAN FRANCISCO 5, CALIF.
7434 SUNSET BOULEVARD LOS ANGELES 46, CALIF.
A complete line of Angier products available from your building material dealer

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Index to Advertisers

ANGIER Pacific Corp. 48
ARCHITECTS Reports 40

BAXTER & Company, J. H. 36
BURKE, W. J. & Co. *

CLARK, N. & Sons *
CLASSIFIED Advertising 43
CENTER Stationery 46
CLINTON Construction Company 38
CONTINENTAL Water Heater Co. *

DETROIT Steel Products Co. 5
DINWIDDIE Construction Co. 47
DUFFY Tile Co. 48

FIREBRICK Construction Co., J. N. J. *
FULLER, W. P. Co. 6 & 7
FORDERER Cornice Works 40

GLADDING, McBean & Co. Inside Front Cover
GUNN, Carle & Company 46

HANKS, Inc., Abbott A. 48
HAWS Drinking Faucet Company 28
HERRICK Iron Works 47
HOGAN Lumber Company 38
HUNT, Robert W., Company 48
HUNTER, Thos B. 47

JOHNSON, S. T. Co. 33
JUDSON, Pacific-Murphy Corp. 40

KRAFTILE Company 30

LE DEIT Glass Co. 25
LUMBER Manufacturing Co. 48

MACNSONS, Contracting Engineers 25
MARBLE Institute of America 2
MATTOCK, A. F. Co. 48
MICHEL & Pfeffer Iron Works Inside Back Cover
MILLER Company, The 33
MULLEN Mfg. Co. 31 & 47

NORTHERN California Electric Bureau 35

PACIFIC Clay Products Co. *
PACIFIC Coast Gas Association *
PACIFIC Manufacturing Company 39
PACIFIC Portland Cement Company Back Cover
PACIFIC Telephone & Telegraph Co. 45
PETERS, A. J. & Sons 25
PITTSBURGH Testing Laboratory 48
POOR Richard Engraving Co. 47

REMILLARD-Dandini Co. 48
REPUBLIC Steel Corporation 39

SAN JOSE Steel Company 25
SCOTT Co. 47
SECURITY Valve Company 32
SIDEWALL Lumber Co. 38
SIMONDS Machinery Company 39
SISALKRAFT Company 38
SMOOT-Holman Co. 37
SOULE Steel Company 29
STANLEY Works, The *
STOLTE, Inc. 46
SWINERTON & Walberg Co. 47

TAYLOR Co., Halsey W. 31
TORMEY Company, The 47

U. S. Bonds 1

VERMONT Marble Company 39

WALKER Co., P. J. 2
WESIX Company *
WESTERN Asbestos Co. 45
WOOD, E. K. Lumber Company 36

*Indicates Alternate Months

Robert W. Hunt Company

ENGINEERS

Inspection - Tests - Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET

SAN FRANCISCO, CALIF.

TILE CONTRACTORS

Shower Doors, Tub Enclosures
Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

253 Minna St., S. F. YUkon 6-1489

DUFFY TILE CO

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

ARCHITECT AND ENGINEER

APPLEBY HALL—Claremont Men's Colleg

JUL 28 1949

JULY 1949

In a setting of magnificent oaks, Mr. and Mrs. Archie Leonard enjoy indoor-outdoor living in their new Menlo Park, California home. The step-saving kitchen is gas-equipped for fully automatic cooking and abundant hot water.

another "California Contemporary"

•ARCHITECT DESIGNED

•GAS-EQUIPPED

George T. Rockrise, A. I. A., affiliated with Thomas D. Church and Associates, San Francisco, designed this spacious home. It is planned for enjoyment of natural beauty outdoors, modern comfort and convenience indoors.

Gas was specified for cooking, hot water service and heating . . . thus extending owner satisfaction to years of carefree comfort.

GAS ***. . . First choice for client good will***

PACIFIC COAST GAS ASSOCIATION

• ARCHITECT AND ENGINEER

Vol. 178 No. 1

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS, A.I.A.
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

The new Appleby Hall on the Claremont Men's College campus, Claremont, California, has been designed by Architects Allison and Rible, Los Angeles, for use as a Dormitory. See article and illustrations on Page 17.

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

JULY

EDITORIAL NOTES 4

NEWS & COMMENT ON ART 8

NEW HOSPITAL BUILDINGS 10
By DR. W. SCHWEISHEIMER

SAN MATEO COUNTY FAIR GROUNDS 12
OSCAR R. THAYER, A.I.A., Architect

NEW INDUSTRIAL PRODUCTS BUILDING, South San Francisco . . . 14
L. H. & B. L. NISHKIAN, Consulting Engineers

CLAREMONT MEN'S COLLEGE, Claremont, California 17
ALLISON and RIBLE, Architects

COLLEGE OF PUGET SOUND, FIELD HOUSE, Tacoma, Washington . . 20
Associate Architects: EARL N. DUGAN, A.I.A.; ERNEST T. MOCK, A.I.A.; NELSON F. MORRISON, A.I.A. (By ARTHUR W. PRIAULX)

OUR LADY OF THE SACRED HEART CHURCH, San Diego, California . 26
FRANK L. HOPE, A.I.A.

A.I.A. ACTIVITIES 30

WITH THE ENGINEERS 32

PRODUCERS COUNCIL PAGE 34
J. WILSON PEELE, EDITOR

HEADLINE NEWS & VIEWS 36
By E. H. W.

IN THE NEWS 37, 40, 46

BOOK REVIEWS, Pamphlets & Catalogues 39

ESTIMATOR'S GUIDE, Building and Construction Materials 41

BUILDING TRADES WAGE SCALES, Northern, Central and Southern California 43

CLASSIFIED ADVERTISING 43

CONSTRUCTION CONTRACTS AWARDED, General Data 44

INDEX TO ADVERTISERS 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office. Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

EDITORIAL NOTES

COMMERCIAL BUILDING COSTS

A recent report submitted by a special committee appointed by the New York Building Congress to make a study of building cost trends for commercial, industrial and multi-family apartment houses, indicates a ten to fifteen per cent drop in building costs in Metropolitan New York from the postwar peak month of September 1948.

The actual percentage decline in the last several months varies according to the type and design of the building, and the Committee expressed doubt that there would be further substantial reductions during the next year.

Of particular interest are the factors contributing to the decline in construction costs, among the most important being 1) The stabilizing influence of the 30-month wage agreement between the Building Trades Employers' Association and the Building and Construction Trades Council, which permits contractors to know their wage rates over a long period of time, 2) Lower material prices and elimination of escalator clauses in contracts with material fabricators, 3) Higher productivity and greater efficiency of labor on the job, 4) Even flow of material to the construction projects, 5) Elimination of contingencies in contracts to cover uncertainties of material, supplies, and labor, and 6) Constructors are offering firm bids whereby ultimate cost of project is known.

Other factors which have a bearing on construction costs, particularly on the West Coast, are such items as freight rates, and taxes, neither one of which has shown any indication of being reduced in the immediate future.

* * *

By reason of depression, war, new needs for defense and greater responsibilities abroad, the U. S. Government has become the largest enterprise on earth.

* * *

FORCE ACCOUNT CONTRACTS

The question as to whether a Government agency should do its construction work by contract or by the so-called force account method is not a new subject, however, the matter was recently brought to attention by Geo. H. Atkinson, president of the Guy F. Atkinson Company, who expressed the opinion in the case of the U. S. Bureau of Reclamation's "force account limitations" as placed in the Interior Department's appropriations by Congress.

"The 'force account' is always insufficient for two general reasons: 1) All employees are Government employees and there seems to be no real pressure for their working very hard, or for the cutting of forces once the work is accomplished, which results in 'permanent' additions to the Government pay roll, and 2) The public service simply does not include enough construction managementt specialists to properly direct the work."

The contentions of Mr. Atkinson will not meet with the general approval as they represent the thinking of a practical business man endeavoring to meet the complex problems of a fast changing economy. Governmental agencies are not interested in any personnel reductions, and the mere fact that a man is a qualified engineer does not necessarily make him a construction manager.

As a private enterprise the Construction Industry is represented by those who have fought their way to the top in a very competitive system and are therefore in a position to give and produce the most for the least cost.

* * *

If American industry is allowed to earn the money to buy equipment, it can raise the American standard of living 50 per cent in our generation—the next 25 years. No other nation can promise its people that much—and deliver on the promise:—James H. McGraw, Jr., president, McGraw-Hill Publishing Co., in "Give us the Tools . . ." your Only chance of getting ahead.

* * *

THE PRACTICE OF ARCHITECTURE

The Architect is a professional advisor in matters of building, employed in a similar capacity as is the doctor or lawyer, and as few people build a home more than once in a lifetime it is essential that they avail themselves of a complete architectural service.

It is quite generally known that the services of an Architect include a discussion of the needs, wishes, location, and budget limitation; that it includes numerous studies involving adequacy and value of the venture, estimates, and sketches; it involves working drawings, a knowledge of materials and methods, and construction supervision; and in many instances the services of the Architect also include the negotiation of actual financing.

You and I know these facts—the real project is to popularize such a reality with the Public. When Jane and Joe Doe know as much about the Practice of Architecture as "we" do there will be nothing to it and we will seek new fields of exploration.

* * *

Our nation has its firm foundation in the thrift of its people and thrift spells security, dignity, and peace of mind.

Celebrates its Centennial

Huge South San Francisco Factory, showing new Industrial Products Building with its own Tank Farm.

Los Angeles Factory, Laboratory and Warehouses.

Portland Factory. Fuller's tri-city facilities exceed those of any combination of other like Western manufacturers.

Six scenes of some of modern equipment in new Industrial Products building. (Top, left) Battery of 34 500-gallon stationary agitator tanks on second floor. (Top, right) First floor outlets of stationary agitator tanks. (Middle, left) Section of 16 100-gallon paste mixers. (Middle, right) 12 of 24 new 15,000-gallon storage tanks. (Bottom, left) One of six roller mills, grinding white enamel base for synthetic finish. (Bottom, right) Small portion of the 50,000 feet of piping in new building.

W. P. FULLER & CO.

Since 1849

Factories at San Francisco, Los Angeles and Portland

•

Branches and Warehouses throughout the West

MAIN BUILDING OF THE NEW 1000 BED VETERANS HOSPITAL **Brooklyn, New York**

NEW HOSPITAL BUILDINGS

By DR. W. SCHWEISHEIMER

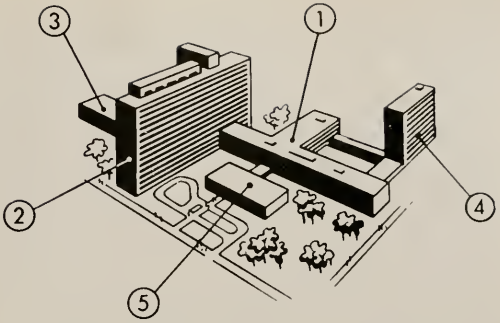
The new Veterans Hospital adjacent to Fort Hamilton Reservation, Brooklyn, New York, which is expected to be completed this fall, is said to be the "most modern skycraper hospital in the world." The seventeen-story building will house 1,000 bed patients and will be capable of handling 3,000 persons daily. Beside the main hospital building there will be two separate apartment-type structures for nurses, hospital attendants and staff, as well as a service building to be used as a power house, garage and laundry.

Construction is being done by the Cauldwell Wingate Company under the supervision of the Army's New York District Corps of Engineers. Approximately 6,000 tons of structural steel will be used. A Republic fireproof floor system of reinforced concrete has been installed in the main hospital and service building. The exterior walls of the main building consist of oyster white brick and stone masonry and are 12" thick.

The hospital is the first to be constructed since World War II for Veterans in the New York Metropolitan Area. The main hospital covers a plot of ground 506 feet by 302 feet and the entire project will take in approximately 18 acres of land. The hospital is so designed as to give each patient a wonderful view of the Narrows Bay and the Harbor. The nurses wing of the hospital is 16 stories high. The nursing units are located on the upper floors from the fourth floor to the sixteenth floor in-

1. College of Medicine and Post-Graduate Medical School.
2. University Hospital.
3. University Clinic and Institute of Rehabilitation.
4. Hall of Residence.
5. Alumni Hall Auditorium.

Skidmore, Owings & Merrill, Architects



clusive. The lower floors of this wing will be occupied by Service, Administration and some Recreational facilities. Treatment and clinical units are located in a separate wing north of the nursing wing.

Recreational facilities required in Veterans Hospitals are logically much greater in extent and variety than is typical in general hospitals. A large portion of the patients are ambulatory and the average duration of their hospitalization is longer than in a general hospital. Concentration of air conditioning spaces in a single room of the building is another instance of simplicity and design ventilation. In order to expedite that construction of this new hospital, four separate contracts were let to outstanding construction firms. All buildings are of fireproof construction, consisting of structural steel, concrete foundations and floors, masonry walls. There is a total of 10,000,000 cubic feet of space in all buildings. The new hospital is the tallest Veterans Administration hospital in the country.

NEW YORK UNIVERSITY-BELLEVUE MEDICAL CENTER

The New York University-Bellevue Medical Center is to be built in a four-block area north of Bellevue Hospital will cost $32,744,000, which is more than the previous estimate. The revised estimate was due to the expansion of the center's program and to the rise in building costs in the last three years. The figure includes construction costs, special equipment and initial underwriting.

The new Medical Center is situated in the Midtown East Side area of New York City. Several blocks to the north of the permanent home of the United Nations. Immediately to the south are the vast new housing projects, Stuyvesant Town (24,000 residents) and Peter Cooper Village (6,000 residents). The new University section of the Medical Center will be an important landmark in the rebuilding of the East Side of Manhattan.

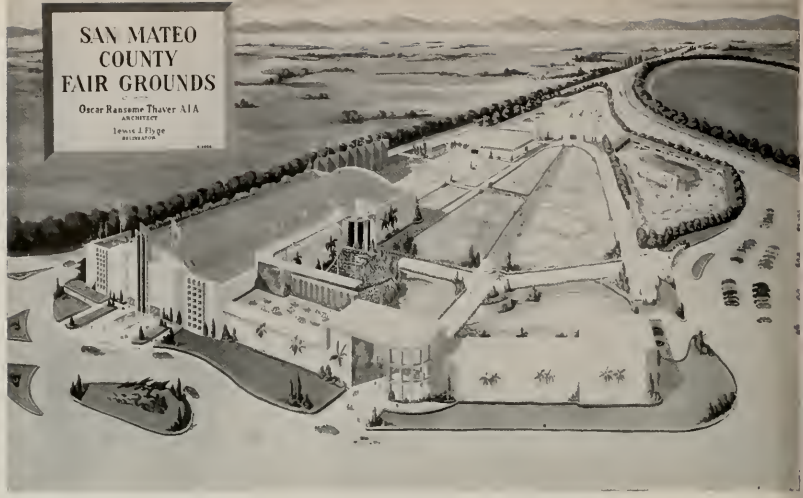
The architectural style of the Center is contemporary in its application to the purposes for which the buildings are to be employed. Windows are used extensively to obtain full advantage of the maximum winter sun and prevailing summer breezes with the most prominent building, the University Hospital, oriented to these same considerations. Special attention has been given to the mechanical features of these buildings to obtain the highest degree of flexibility to meet changing conditions and future advances in both the medical sciences and construction facilities. The new section commands a view of a wide sweep of the East River.

The general plan provides open areas, landscaping, parking, a reflecting pool and plantings and maximum of light and air.

The University Hospital has 600 beds and is 20 stories in height. It will have special provision for patients from the middle-income group with ward, semi-private and private care for the patients of doctors on the faculties of the Medical Center. Special treatment of the exterior of the hospital unit between the lower and upper parts of the hospital elements provides a floor entirely devoted to air conditioning, mechanical apparatus and other required services.

The Institute of Rehabilitation and University Clinic includes training rooms, laboratories, a therapeutic swimming pool and an exercise pool. Connected directly with the buildings housing the University Hospital and the Institute of Rehabilitation is the College of Medicine and Post-Graduate Medical School which contains classrooms, research laboratories, administrative offices and related facilities.

Other buildings are the Hall of Residence with living accommodations for several hundred undergraduates and the Alumni Hall Auditorium which will be used for meetings.



SKETCH OF HOW PROJECT WILL APPEAR WHEN FULLY DEVELOPED

NEW SAN MATEO COUNTY FAIR GROUNDS

Represents Planned Community Recreational Development Project

Architect: OSCAR R. THAYER, A.I.A.

The project included several phases of development with the Main Auditorium (large building seen at left, above), containing some 64,000 square feet of floor space already completed, together with several "wing" areas.

The building is of concrete blocks with 120 foot roof struss span, while the 40 by 120 "wings" have been divided into several use areas including a horticultural exhibit area; Cocktail Bar; Kitchen and dining room providing for 500 people; a Hobby Room, 40 by 80 feet; and a space for the Women's Garden Clubs of San Mateo County which has a separate kitchen, dining room, and rest room facilities.

The central section of the building is 120 by 340 feet, and while it is to contain the floral exhibits during the annual San Mateo Fiesta celebration, at other times of the year will be the center of various community events such as, basket ball, and other sports events.

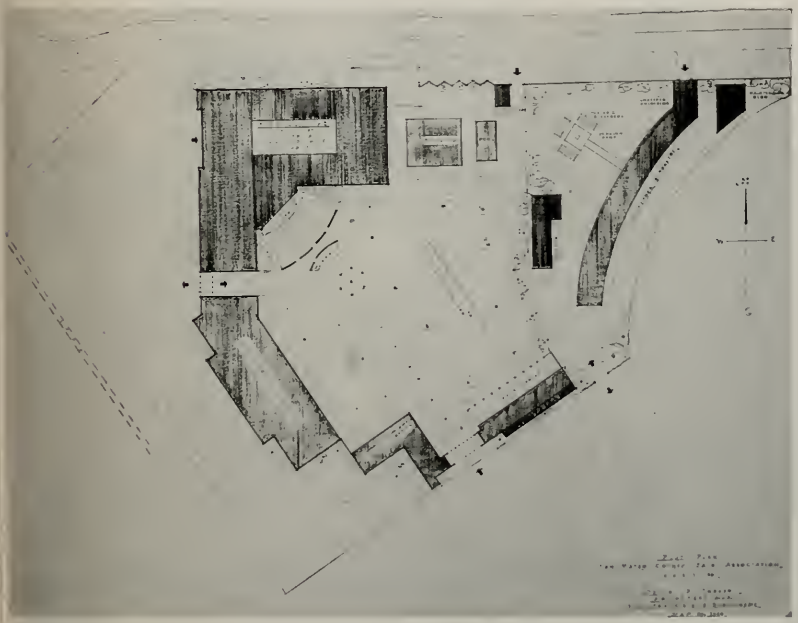
Scheduled for construction is an open air theater with a seating capacity of 5000 and a complete stage, to be located immediately adjacent to the main Auditorium Building.

Pictured in the foreground, and scheduled for later construction, is the Machinery, Automobile, and Farm Equipment Hall which will contain 60,000 square feet. Further to the right is the Administration Building, Main Entrance to the grounds, and the special space for automobile parking. Near here will be a lake to be used for model yachts. To the right and rear of this is the Amusement Area where special entertainment features such as carnival, etc., will be located.

The center section of the Project is divided into irregular garden planning sites which will be changed each year, planted, and cultivated under supervision of the San Mateo County Garden Clubs.

Directly in back of the main auditorium will be an open air dance floor with accommodations for 300 couples and back of that will be a swimming pool which will be open and available to the community during the summer months. The plan also calls for a 60 by 120 foot building to be used for model airplane exhibit and contests; livestock barns and exhibit arenas, and poultry exhibit facilities. A caretaker's house will also be constructed in this area.

PLOT PLAN—San Mateo County Fair Association, San Mateo, California

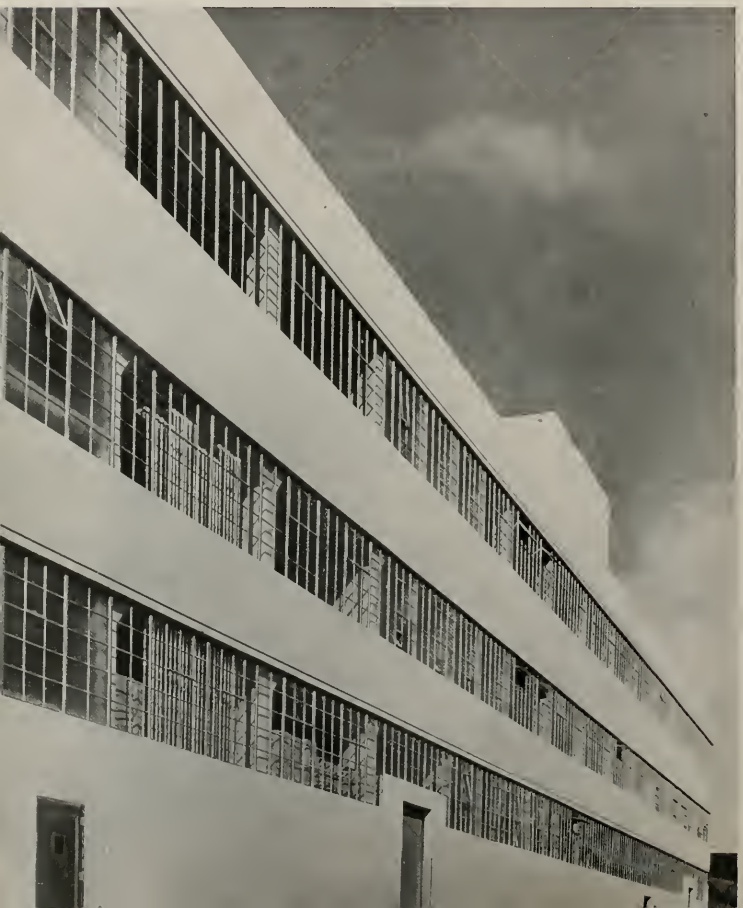


New

INDUSTRIAL PRODUCTS BUILDING

South San Francisco, California

L. H. and B. L. NISHKIAN	Consulting Engineers
G. M. SIMONSON	Consulting Electrical Engineer
PARKER, STEFFENS & PEARCE	General Contractors



- Three stories and a penthouse high atop the new structure is of reinforced concrete construction.

- Approximate cost is $1,000,000 with an additional $500,000 for new, modernized equipment to produce 10,000 different finishes.

- Original drawings for the basic design of the buildings were produced by the W. P. Fuller & Company, Engineering Division, under the direction of Mr. G. L. Gibson.

Photograph at Left—shows clean-cut architectural design with emphasis on natural daylight lighting.

Photagraph Below—shaws interiar layaut in geometrically precise pattern of machinery and equipment location.

Pent House contains a lunch and recreation room which overlooks the hillside tank farm which supplies the factory's paint and varnish departments.

The new $1,500,000 reinforced concrete Industrial Products Building of the W. P. Fuller & Company at South San Francisco, represents one of the latest designs in specific industrial construction to be completed on the West Coast since the war.

The building which contains many special features analogous to the paint manufacturing business has been designed and constructed to permit a maximum of production and utility use with an absolute minimum of effort. Facilities are available for the production of more than 10,000 different paint finishes, to be used on almost every type of item it is possible to manufacture, and the new plant will turn out more than 200,000 gallons of such finishes per month.

The clean-cut, functional exterior lines and soft Glacier Green Concreta coloring are an idex to the streamlined efficiency of the building's interior appointments. Every modern device known to make the work safe, clean and pleasant for the employee has been incorporated in this structure. Large windows which admit the utmost in light during the work-day; floors which have been treated with a special preparation called Iron-Cote to make them spark proof; an electrical vault handling all controls for the building is a part of the structure although it is only open to the outside; and explosion proof wiring and fixtures. Special consideration has also been given to the health and comfort of the employees by use of washrooms, showers, and recreational facilities for use during lunch and rest periods.

An imaginary inspection would start with the roof, where a birds eye view of the adjacent area discloses the Tank Farm which serves as storage and supply the numerous solvents used in the manufacturing processes, as the design of the building provides for the initial manufacturing to start at the top and use gravity for advance utilization of raw materials in paint manufacturing, with the final products packaged and shipped from the ground floor.

The roof includes the Penthouse where the lunch and recreation room is located, and is the beginning point for some of the manufacturing.

Leading down to the third floor is a stairway done in Sunlight and let-down Production Green,

(See Page 43)

Master Plot Plan

Claremont Men's College

Claremont, California

EXISTING BUILDINGS

1. President's House
2. Story House
3. Appleby Hall
4. Green Hall
5. Student Recreation Building
6. Library

FUTURE BUILDINGS

9. Dormitory No. 4
10. Dormitory No. S
11. Academic Building
12. Auditorium
13. Academic Building
14. Dining Hall

PROPOSED 1949 BUILDINGS

7. Pitzer Hall
8. Dormitory No. 3

PITZER HALL (1949)

Gross Area: 16,700 square feet. Building Unit composed of a two-story Administration unit and four one-story Classroom buildings connected by a covered passage.

Materials (Administration Unit): Foundation, exterior walls, floor and roof slabs reinforced concrete. Roof, shingle tile; windows, steel casement; doors, flush plywood; interior finish, exposed concrete and plaster; floors, stained cement and asphalt tile; ceilings, acoustic tile in main areas; roof space insulated.

(Classroom): Floor and roof slab, reinforced concrete; walls, concrete and concrete block; piers, of passageway, concrete block; windows, steel projected; doors, flush plywood; interior finish, exposed concrete and plaster.

ARCHITECT: ALLISON and RIBLE

STRUCTURAL ENGINEER: F. N. ROPP

CONTRACTOR: WM. C. CROWELL COMPANY

GREEN

HALL

Dormitory

Number Two

ARCHITECT: ALLISON and RIBLE **STRUCTURAL ENGINEER: F. N. ROPP**

Gross Area: 13,250 square feet (Each).

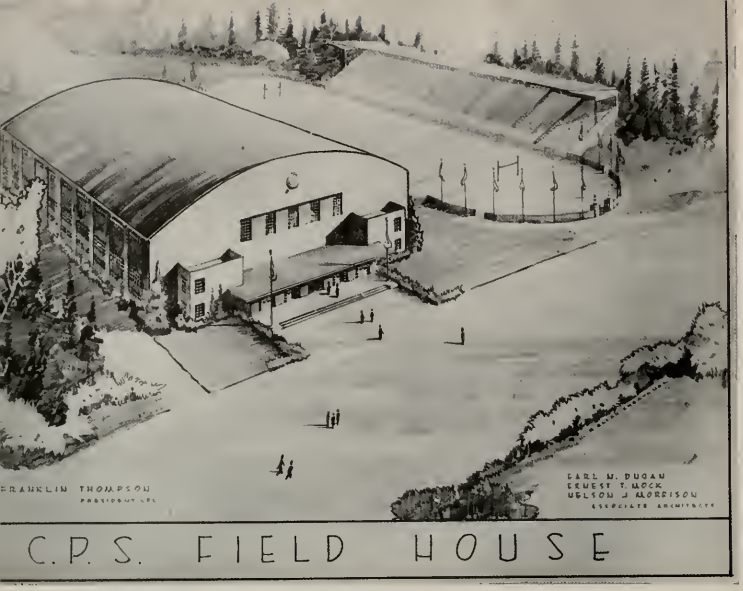
Materials: Foundation, exterior walls, longitudinal center wall, floors and roof are reinforced concrete. Roof, shingle tile; windows, steel casement; gutters and downspouts, copper; balcony railing, expanded metal mesh; longitudinal walls, exposed concrete inside and out; lateral partitions, insulated wood forming wardrobes; bathrooms, enameled pressed wood walls, tile floor and full tile showers: doors, flush plywood; floors in bedrooms, asphalt tile.

Colors: Exterior painted in tones of ivory and terra cotta; interiors in quiet pastel shades; cement steps, balconies and terraces stained green.

This new institution while anticipating future trends has avoided harsh conflicts with surrounding collegiate buildings which are in pleasing traditional style. These include the Scripps College group to the north and Pomona College to the south and west. The Architecture of the dormitories is of simple, unpretentious residential character. The function of the building indicated that it be fireproof, combining maximum relative economy, speed of construction and excluding plaster.

A small basement area houses the mechanical equipment, storage, wash and mending rooms. Steam convector heating from source at main plant.

CONTRACTOR: DORMITORY No. 1 (1947) E. S. McKITTRICK CO.
DORMITORY No. 2 (1948) BARUCH CORPORATION



ARCHITECT'S SKETCH of Field House *P & G Studio*

College of Puget Sound
FIELD HOUSE
Tacoma, Washington

Associate Architects:

EARL N. DUGAN, A.I.A.
ERNEST T. MOCK, A.I.A.
NELSON F. MORRISON, A.I.A.

By ARTHUR W. PRIAULX

Atop the promontory back of Point Defiance and looking out over Tacoma's bustling harbor and Commencement Bay is the northwest's newest college athletic plant, attractive $400,000 College of Puget Sound Field House. In this completely functional building Architects Earl N. Dugan, Ernest T. Mock and Nelson F. Morrison have combined some of the beauty of the old Roman amphitheatres and much of the newest in public building requirements.

The field house was originally designed as a roofed-over area with earth floors. When news of the proposed project got around Tacoma, the businessmen promptly formed a committee, raised

over $350,000 in cash. They wanted a more elaborate structure which the community could use as well as the college as an auditorium, concert hall and athletic pavilion. Dr. Franklin Thompson, College of Puget Sound's aggressive president, gladly had the architects redesign the larger, more complete plant.

Now nearing completion, the building dominates the campus of this rapidly growing college of 2,000 students. With $400,000, the architect's problem was to design the largest possible structure which would be permanent and adhere to the strictest code of safety and convenience.

The Field House is 168 feet wide by 200 feet long and will accomodate 3,000 spectators in permanent seats and 2,700 additional in demountable bleachers set up along the playing court. The inside court measures 80 feet wide by 200 feet long and is large enough for three basketball courts to be used simultaneously.

Most striking characteristic of this new pavilion is the design of the arched roof. Nine Monochord-type trusses, 168 feet of the building's width. Viewed from within, they form an intricate, lacy pattern which gives a distinctive beauty and unusual dignity to the building. They have functional qualities, too, for they eliminate any need for support columns within the structure which can be a nuisance to spectators. Not a pillar or post is needed anywhere in the field house.

The trusses were prefabricated at Longview and shipped to Tacoma for assembly. It took one working day for four men to assemble each truss. The trusses were made up of 6x12, 6x14 and 6x16 inch timbers in the top and bottom chords and the web members in the truss were cut from 4-, 6- and 8-inch stock.

Raising the trusses into position so as to avoid wracking, required real ingenuity. Because the trusses are designed for compression strength a truss' own weight could pull it apart during lifting. To avoid this, the contractor ran a reinforcing cable the full length of the top chord and hooked it to the lower chord at the ends. Then an 80-foot telephone pole was lashed to the top chord. A sling was attached to each side of the lower chord and additional slings to the top chord to prevent turning.

A motor crane with a 75-foot boom then picked the truss up bodily, walked it some 200 feet from the assembly point and hoisted it into position on the walls, 60 feet above the ground at the top of the truss. Purlins were then placed in position by a long-boomed crane equipped with a jib boom to reach over the truss. It required a record time of only thirty minutes to place and secure each truss. The same cranes then lifted some 90,000 feet of sheathing or decking onto the roof. The roof covering is built up from asphalt paper. Trusses were steered into place by guy lines attached to each

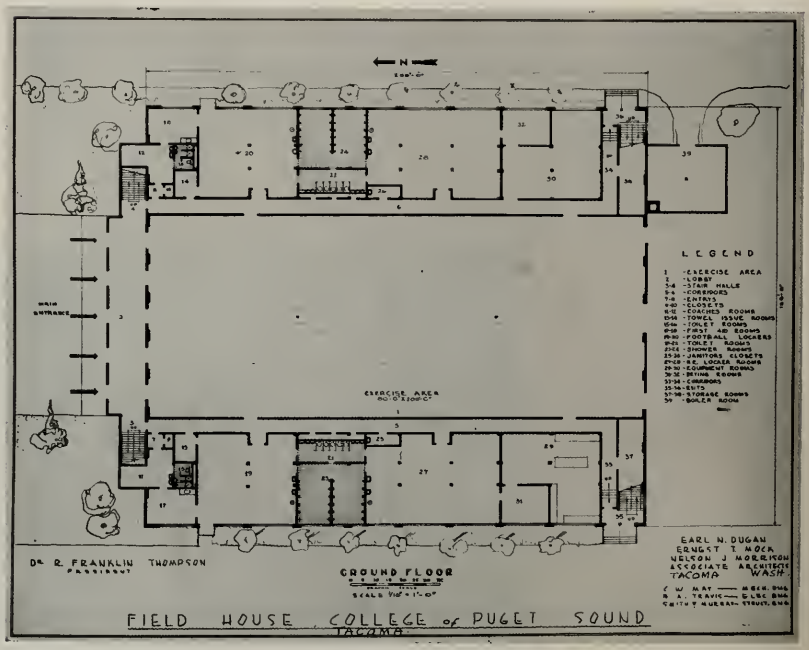
INTERIOR before maple floor is laid. Shows amphitheatre plan with permanent bleacher seats high above floor level.

end. The 200-foot side walls of the building and all cement work excepting the center section of the rear wall were cast before the trusses were placed. Side walls go up 37 feet to the eaves. The trusses are 24 feet in depth from the bottom to the highest section of the top chord.

Exterior walls are of reinforced concrete cast in forms built up from 5/8 inch plywood. Reinforced concrete was also used inside the structure to support the permanent seating sections on either side of the playing area. Fifteen-foot high cement walls above which the spectator area rises carry out the Roman theme of the ampitheatre and form the enclosure for the playing field or floor.

Adequate care of the spectators was uppermost in the minds of the designers and architects. Five double entrance doors along the front of the Field House insure rapid handling of the maximum crowd which the structure can accommodate. Wide stairways lead up from both sides of the large inner hallway, into which the outside doors enter, to the mezzanine level. Four wide ramps, conveniently located along the 200-foot bleacher section, carry the crowds in and out of their seating areas with a minimum of trouble. Additional double exit doors are provided at the rear of the building and open handily onto the paved walks which surround the building and are convenient as well to the four-acre car parking lot adjoining the Field House on one side and rear. All permanent seats have been designed with backs to insure comfort of guests.

GROUND FLOOR PLAN shows utility of space, accessibility for crowds, and well arranged facilities for comfort and convenience of athletes.

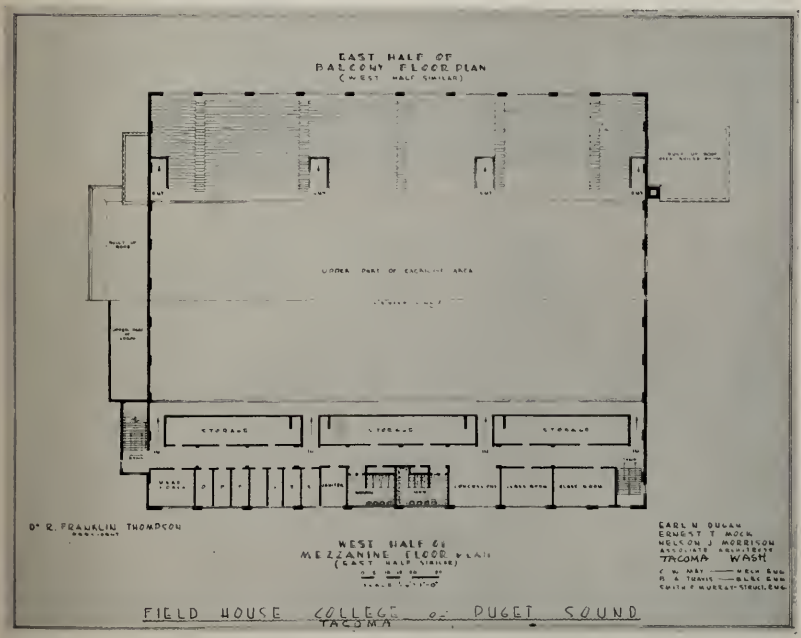


Opening from the inner front hallway are two narrow hallways which run the full length of the building. Access to this hall can be had through four large double doors from the playing court, two on each side. The long hallway serves also as entrance to a number of rooms built beneath the permanent bleacher sections. In this 40 by 200 foot space are football locker rooms, first aid station, physical education locker rooms, shower rooms, equipment rooms, towel rooms, coaches' room, drying room and janitor's closet. An identical room arrangement is provided on the other side of the building beneath the other permanent bleacher section.

On the mezzanine level complete utility of space has been achieved. On the west side level concession areas have been built and toilets for both men and women installed for crowd convenience. Coaches offices have been built on this level under

CRANE with jig boom lifts purlins into place and also lifts decking for huge roof area.

SECOND LEVEL of the pavilion shows the architect's excellent solution of the problem of making the building serve a multiplicity of uses.



SECTION of permanent bleacher seats with attached backs, looking toward the front of the field house. Two fire walls have been built into the truss section.

Forde & Carter, Photo

CLOSE-UP view of roof and truss members shows strength of Monochord design. Complete rigidity is had and obstructing pillars are eliminated.

the bleacher sections to accommodate the college's six coaches. Two classrooms have also been worked into the space as well as storage rooms for the janitors' supplies. On the east side mezzanine level the concession space and toilets also have been installed and in addition three large classrooms are designed.

The Field House has its own heating plant in a separate but attached building which provides not only heat but hot water for showers, wash room and towel laundry. It is powered by three oil-burning boilers, manufactured in Tacoma. The building is also provided with an exhaust type ventilating system and the same system has been installed in the shower and locker rooms.

A feature of the building is the suspended press box, reached by a catwalk and with complete visibility of the entire playing area. This press box

is 8 by 40 feet long and glass enclosed. Separate sections have been built for radio use so that room sounds and crowd noises will not go out on the air. The press box is raised high enough so that it does not interfere with the vision of any of the spectators.

Another feature of the building is the floating maple floor which is designed to give maximum resilience and to minimize player discomfort. A solid concrete slab was first laid for the floor. Then one course of 2x4s was laid with 32 inch spacing. A second course of two by fours was then laid at right angles to the first with 16 inch spacing. On top of this sub-floor of 5/8 inch plywood (salvaged from the form lumber) was laid. The maple flooring was then laid and the finished floor has a spring and give. A small amount of air is forced under the floors and flows across the narrow way of the building to prevent dry rot and accumulation of dampness.

The building has been designed to give maximum daylight in a series of windows on all four sides set in steel sash. Both ends of the playing court are lighted with solid sections of glass set inside the structural cement ribs of the end walls. On the rear wall a cathedral effect has been obtained with long sections of vertical glass installations. Along the side walls where classrooms and offices are located, all wall space not needed for structural strength has been given over to glass. Fluorescent lighting has been installed throughout the building for artificial requirements.

(See Page 35)

GROUND LEVEL CORRIDOR

keeps crowds off floor and provides access to shower and dressing rooms, extends full length of building.

ENTRANCE HALL

Five double entrance doors for rapid handling of crowd.

ARCHITECT: Fronk L. Hope, A.I.A.

GENERAL CONTRACTOR: Nielsen Construction Company

CONSTRUCTION: Reinforced Concrete

OUR LADY OF THE SACRED HEART CHURCH

Orange and Marlborough Avenue SAN DIEGO, CALIFORNIA

This imposing structure for Our Lady of the Sacred Heart Parish at the corner of Marlborough and Orange Avenues in San Diego, California, is constructed of reinforced concrete, including the floors, walls, and roof, and replaces previous Church properties which were originally established in the community in 1911.

In designing the footings for this particular Church, it was found necessary to make preliminary test holes to determine the depth of the layer of "adobe" that covers this area of southern California. These tests showed that the adobe strata extended to a depth of from 8 feet to 12 feet below the top surface, and in making the final designs for construction it was planned for all structure footings to extend down through the entire layer of adobe and rest on the hard-pan formation underlying the adobe.

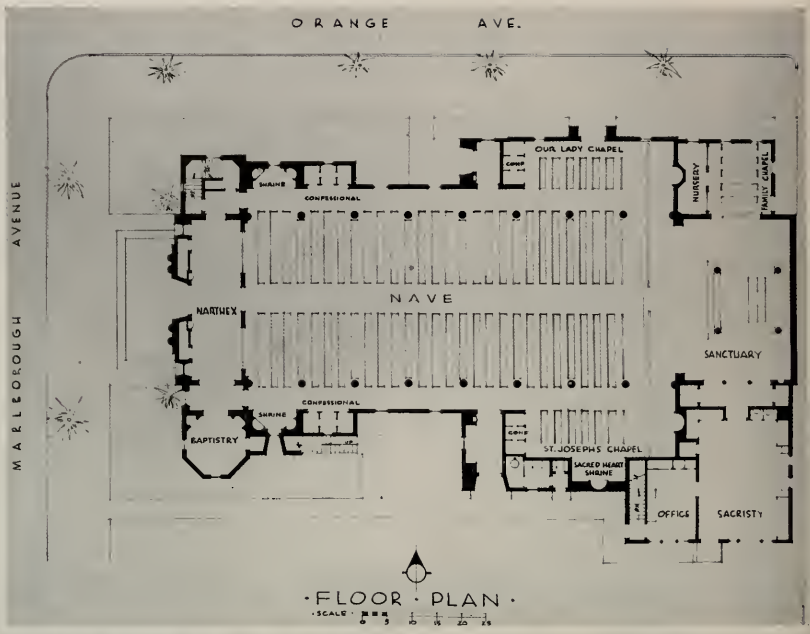
In designing the Church, Architect Frank L. Hope, A.I.A. of San Diego, took advantage of the development of every phase of structural engineering, while adhering to the traditional style of church architecture which gives a distinctive mark to the church edifice and is enriched with the hallowed associations of the centuries.

The particular type of architecture, the Spanish Colonial, was adopted for its historic and climatic reasons—the beginning of California history is forever linked with the history of Catholic Spain, and because the climate of San Diego is somewhat similar to that of Sunny Spain—however, the Baroque element has been greatly restrained.

The exterior finish of the building is of plaster with ivory-toned stucco finish, with a variegated Spanish tile roof laid in an attractive texture pattern. The Dome of the attractive tower is finished in azure blue and gold decorative tile panels with inserts symbolizing Faith and Hope; while surmounting the dome is the symbol of Christianity itself, the Cross resting on the orb.

The facade is distinctly Spanish, yet the sparing use of baroque and the slender vertical columns, gives lightness and height that are most pleasing

SPANISH STYLE DOORWAY



to the eye. Also in distinctly Spanish motif is the deeply recessed doorway and massive oak door, made still more massive by use of wrought iron fittings of medieval design.

The Church atmosphere is easily sensed on entering the structure with the interior finish including walls of tinted stucco and muffletone acoustical tile. The ceiling is painted acoustical tile and acoustical plaster in the panels. Floors are of terrazzo in two shades of green. The same finish is carried into the Sanctuary.

The woodwork throughout including the doors, pews, confessionals, narthex paneling, and sacristy appointments is of a select white oak that has been stained to a light walnut color.

The seating capacity of the Nave is four hundred and seventy-four, while Chapel Number One has been designed to accommodate twenty-four.

INTERIOR—NAVE

In planning the Church, every detail was so arranged that the eye would be directed immediately to the High Altar, and the results of the architect have been outstanding. There are no side altars within the Sanctuary.

The High Altar is of the baldachino type, recalling some of the altars of the Eternal City, and is of select Italian marble. The altar was made and assembled in Italy before being shipped to this country and installed in the church. The same thing applies to the altar rails.

The quiet dignity of design of the Baptistry is of particular interest and is octagonal in design which is carried into the ceiling treatment including the light fixtures. The Baptistry font and the floor is of select Italian marble while the gate is of wrought iron finish.

Between the Narthex and the Nave are plate glass panels which cut off the sound between the two, but at the same time permits unobstructed visibility and gives an opportunity to see what is going on in the church prior to entering the Nave proper. This is particularly desirable in instances of large crowds, such as Christmas Midnight Mass, where people in the Nave can see and hear the Mass and Sermon.

THE TOWER

Chapel Number Two also provides for a total of twenty-four; the Invalid Chapel accommodates twenty persons; and the Choir has been designed for seventy-five.

The combined Invalid and Family Chapel has an additional feature of a soundproof, air conditioned nursery.

The Nave lighting units have been so engineered that the fixtures are flush and completely concealed in the soffit of the arches, with special spot lights being focused on points of particular interest thus eliminating great overhanging fixtures, yet furnishing an even amount of desired light.

Emphasis was placed by the architect on proper acoustics and sound engineering so that every part of the church proper and also the adjoining chapels and Narthex would have perfect hearing from the altar, pulpit and the choir. Also of more than passing interest is the unique intercommunicating system between the Sanctuary, Sacristy, Choir, ad Rectory.

Considerable thought was given to the matter of the forty stained glass windows throughout the Church, and the "Twelve Apostles" have been adopted and developed for the unifying theme of the clearstory windows.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell O. Cannon, President; William I. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA — NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

SOUTHERN CALIFORNIA CHAPTER

The July meeting was devoted to an analysis of the architectural profession work-shop, with reports being made to members on Chapter activities by Chairmen of the following Committees:

Legislation, by Frederick N. Clark; Public Works, by Ben H. O'Connor; Ethics and Practice, by Kemper Nomland; Membership, by Olive Chadeayne; Educational, by Savo M. Stoshitch; Lecture, by Cornelius M. Deasy; Exhibit, by Frank Gruys; Urban Redevelopment and Housing, by Charles O. Matcham; Contracts, by George B. Allison; and Chapter Display, by Denver Markwith.

* * *

Member Richard Neutra, F.A.I.A., has been awarded an "honorary corresponding membership" in the Royal Institute of British Architects.

* * *

The recent meeting devoted to the U. S. C. Student Chapter was outstandingly successful.

ROYAL FURNITURE DESIGNER IN TOUR OF UNITED STATES

Neil Morris, 31 year old Scotsman, who is executing two royal commissions for the furnishings of the London home of Princess Elizabeth and the Duke of Edinburgh is making a tour of the United States. His itinerary includes San Francisco and Los Angeles.

PRODUCERS' COUNCIL AWARD

Upon the recommendation of a joint A.I.A. and P.C. National Committee, a certificate of Merit was given to N. K. Jovet of the Michel and Pfieffer Iron Works, Inc., on July 11th, for material prepared and released for his company and subsequently entered in the Product Literature Competition.

NORTHERN CALIFORNIA CHAPTER

A recent meeting was devoted to a combined gathering of the East Bay Chapter, the architectural students of the University of California at Berkeley, and the Northern California Chapter, at the Faculty Club in Berkeley.

An exhibition of the students' work was arranged and awards and presentations of various medals for the year 1948-49 were made in the Patio of the Architectural Building.

JAMES B. DuPRAU IS NEW VICE-PRESIDENT

James B. DuPrau, assistant to the President of Columbia Steel Compay since 1943, has been named vice-president-administration, according to a recent announcement by Alden G. Roach, President of Columbia.

A.I.A. PRESIDENT ATTENDS INTERNATIONAL CONFERENCE

Ralph Walker, president of the American Institute of Architects, recently attended an executive committee meeting of the Union Internationale des Archictectes in Stockholm, Sweden.

Meetings were also held in Gothenburg, Sweden.

ANONYMOUS SCHOLARSHIP FUND

An anonymous gift of $20,000 has been given to Columbia University to provide a scholarship fund honoring Miss Lila W. Van der Smissen, former curator and secretary of the School of Architecture who died last year.

Announcement of the gift was made by Dean Leopold Arnaud of the School of Architecture.

It will be available to students with limited means.

GILLETT NAMED DIRECTOR OF PRODUCERS COUNCIL

William Gillett, vice president of Detroit Steel Products Company, Detroit, Michigan, has been elected to the board of directors of the Producers Council, according to a recent announcement by Charles M. Mortenson, executive secretary of the Council.

The next meeting of the national organization of manufacturers of building materials and equipment, is scheduled for September 28th in Chicago.

WHEN PRICE IS THE FACTOR...
...USE ECONOMY!
"PRICE?" You'll answer that more and more often now. With the ECONOMY you can sell low price, high quality and fast recovery.
The ECONOMY is only one of a complete line.
Write for illustrated, detailed catalog.
Continental WATER HEATER CO.
1801 Pasadena Avenue • Los Angeles 31, California
A subsidiary of National Steel Construction Co. with plants at LOS ANGELES • SEATTLE • LOGANSPORT
All models are approved by A. G. A. for LP, Natural and Manufactured Gases

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Anderson, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Harry W. Bolin, President; E. C. Hillman, Vice-President; Robert Short, Secretary-Treasurer. Directors: S. B. Barnes, Lewis Osborne, John Case, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

ILLUMINATING ENGINEERING SOCIETY PICK NEW OFFICERS FOR 1949-1950

The Illuminating Engineering Society, with central offices in New York, have announced the election of new officers for the year 1949-1950. They will take office on October 1st.

President is Charles H. Goddard, Sylvania Electric Products, Inc., Ipswich, Mass.; Vice-President is S. G. Hibben, Westinghouse Electric Corp'n., Bloomfield, N. J.; Treasurer, E. M. Strong, Cornell University, Ithaca, N. Y.; General Secretary, A. H. Manwaring, Philadelphia Electrical & Mfg. Co., Philadelphia; and Directors Duncan M. Jones, Curtis Lighting of Canada Ltd., Montreal, Que.; R. L. Biesele, Jr., Southern Methodist University, Dallas, Texas.

New Regional Vice-Presidents to be installed in October are: Southern Region, Joe B. Browder, Georgia Power Co., Atlanta, Ga.; Canadian Region, G. F. Dean, Toronto Hydro-Electric System, Toronto, Ont.; Southwestern Region, F. A. Covington, City Public Service Board, San Antonio, Texas; and East Central Region, J. S. Schuchert, Duquesne Light Co., Pittsburgh, Pa.

Recognized Everywhere!

IT'S HAWS FOR HIGHEST QUALITY

- Best Materials
- Finest Workmanship
- Trouble-free Valves and Fittings
- Complete Sanitation

Write today for '49 HAWS Catalog. Specify HAWS—and be sure!

HAWS SANITARY DRINKING FOUNTAINS ELECTRIC WATER COOLERS

HAWS DRINKING FAUCET CO.

1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA

Agents and Sales Representatives in All Principal Cities

AMERICAN SOCIETY FOR TESTING MATERIALS OFFICERS ELECTED

Officers elected to serve the American Society for Testing Materials for the ensuing year, selected at the annual meeting the latter part of June, included the following:

President J. G. Morrow, Metallurgical Engineer, The Steel Company of Canada, Ltd., Hamilton, Ontario; Vice-President Frank E. Richart, Research Professor of Engineering Materials, University of Illinois, Urbana, Illinois; and Directors Robert D. Bonney, Assistant of Manufacturing, Congoleum-Nain, Inc., Kearny, N. J.; C. H. Fellows, Head of Chemical Division, Research Department The Detroit Edison Company, Detroit, Michigan; Harrison F. Gonnerman, Assistant to Vice-President for Research and Development, Portland Cement Association, Chicago, Illinois; Norman L. Mochel, Manager of Metallurgical Engineering, Westinghouse Electric Corp'n, Philadelphia, Pa.; and M. O. Withey, Dean of the College of Engineering, University of Wisconsin, Madison, Wis.

ILLUMINATING ENGINEERING SOCIETY NATIONAL TECHNICAL CONFERENCE

The 1949 national technical conference of the Illuminating Engineering Society will be held in the French Lick Springs Hotel in southern Indiana on September 19 to 23, according to a recent announcement.

Among members of the Northern California section of the Society who will attend the conference

are: Chairman S. H. Hazleton, district engineer lamp department of General Electric Company; and Professor Dan M. Finch, University of California, and Chairman elect for 1949-50.

Professor Finch will present a paper, "Lighting Design for Night Driving", in a technical session on street lighting on September 22.

A forum session and technical session on residence lighting, will feature the five-day conference. Light sources, color problems, and specific lighting installations will be among other topics discussed.

1949 NATIONAL OFFICERS GENERAL CONTRACTORS

Adolph Teichert, Jr., president of A. Teichert & Son, Inc., general contractors of Sacramento, California, is serving the Associated General Contractors of America as President for the 1949 term.

He was named president at the organization's recent annual meeting in New Cork City.

Other officers elected to serve during the year included, J. W. Brennan, Brennan & Cahoon, Inc., Pocatello, Idaho; J. V. Bartholomew, J. G. Bartholomew Co., Dallas, Texas; Charles L. Harney, Chas. L. Harney, Inc., San Francisco; Edward O. Earl, San Xavier Rock & Sand Co., Tucson, Arizona; Carl E. Nelson, Carl E. Nelson Co., Logan, Utah; and Hal C. Dyer, Dallas, Texas.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The July meeting was a barbecue and picnic at the Diablo Country Club, near Oakland, on July 16th.

A good representation of members, friends and guests, enjoyed a day of baseball, golf, swimming, horse shoe pitching, fun and relaxation.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Members recently heard an interesting report from Ed Stahl on his trip to Sweden where he made a special study of modern Swedish building construction, as compared with American methods.

Committee reports included Building Codes, by Harold King; Seismology, by Rube Binder.

New Members include JUNIOR, Robert O. Wilson, Stanley H. Mendes, and Ted Niederhoffer; ASSOCIATE, David Witherly and Geo. Novikoff.

ENGINEERING INSTITUTE

The second annual meeting of the Heat Transfer and Fluid Mechanics Institute was held on the Berkeley campus of the University of California, the latter part of June.

Dr. Richard G. Folsom, professor of mechanical engineering, was general chairman.

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.
SAN FRANCISCO, CALIF. HEMLOCK 4100

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco • DO 8311

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Galitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. Maclennett, Mueller Brass Company, 475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

INTRODUCING!
John (Jack) J Armstrong

John (Jack) J. Armstrong, Sales Representative, San Francisco Area, for David E. Kennedy, Inc.

Jack was born in San Jose, California on May 18, 1917, where he attended Lowell Grammar School, Woodrow Wilson Junior High School, San Jose High School, and completed two years Junior College at San Jose State. After the war, he attended the University of California, at Berkeley, majoring in Marketing, and obtained a B.S. degree in Business Administration.

After completing Junior College, he joined the Navy, in 1940, as an

John (Jack) J. Armstrong, Sales Representative, San Francisco Area, for David E. Kennedy, Inc.

apprentice seaman, Naval Reserve, and emerged a Lt. Commander in 1946. During this time, he served on the U.S.S. Helena, U.S.S. Cleveland and the U.S.S. Indepen dence. His final days in the servic were spent serving as Port Directo of Purvis Bay in the Tulagi-Guada canal area

Jack had a diversified busines education in the prewar era, in cluding Heald's Business College "peddling" vacuum cleaners, sel ing insurance and employment b the Southern Pacific Company which included handling ma sacks and selling tickets. He ha been employed by David E. Ken nedy, Inc. for over two years in h present capacity.

He is a member of the Naval Reserve, Free and Accepted Ma sons, and is an amateur ichthy ologist, which absorbs most of h spare time.

NATIONAL NEWS:

Expenditures for new construction in 1949 are expected to decline only slightly as compared with 1948, owing to an anticipated increase of 22 percent in publicly financed projects, according to a revised forecast issued by the Producers' Council.

"The value of privately financed construction, on the other hand, is estimated at about 9 per cent less than last year," Mr. Charles M. Mortensen, Council Executive secretary, stated.

"The total value of new construction is forecast at $18.4 billion, of which 72 per cent would be privately financed.

"Every major category of private building is expected to decline, except warehouse, office, utility, and institutional construction. The estimates show a drop of 17 percent in stores, restaurants and garages. The increase in utility expenditures is attributed mainly to increased construction by power and light companies.

"Increases are anticipated in every important type of public construction, except military and naval. The major gain in dollars is expected i school construction where an increase of 50 pe cent is forecast. Highway construction is estimate at $1.7 billion, an increase of 6 percent over la year, and sewer and water construction is expec ed to rise 20 percent.

"Although the total forecast for the year is lowe in dollars, an actual gain in the amount of physica construction is anticipated, because building cos during 1949 probably will be somewhat lower tha in the preceding year."

LOCAL MEMBERSHIP NEWS:

We have been informed that H. A. (Sco) Scofiel has been promoted to Regional Sales Promotio Manager for Libbey-Owens-Ford, with headquc ters in Dallas, Texas. His territory will cover Texo Oklahoma, Arkansas, Mississippi and Louisian We know that all the members and his friends wis him the success he so richly deserves.

Wayne Rawlings has been named Gener Manager of Harbor Plywood Corporation for Ca fornia. Although he will be commuting regular

to Los Angeles, he says he hopes to see us at our regular meetings. Congratulations, Wayne.

We are glad to welcome a new member. The Industrial Products Division of Johns Manville has taken out a membership, with John H. (Jack) Goodwin, as the member, and H. R. (Ed) Nelson and Wilbur (Mac) McKay as alternates. We hope to see a lot of Jack and his co-workers.

Owens-Corning Fiberglas opened their new plant in Santa Clara July 5th. This is the type of modern plant that is helping industry grow in the Bay Area. The members of the Council extend best wishes to the management for continued success.

Did you hear that the office of the Natural Gas Equipment Company was partially destroyed by fire? We all feel for Art Staat and his gang, as this hampered their activities considerably.

Here they are! The scores of the golf tournament at the Peninsula Country Club:

Low Gross—Producers' Council Member or Alternate—Ray Brown 88; **Low Gross**—Interim Member of the Council—George L. Smith 79; **Second Low Gross**—Interim Member—Bob Wagner 91; **Low Gross**—Guest—Dormer Peterson 83; **Second Low Gross**—Guest—Wilton Smith 85; **Third Low Gross**—Guest—Tie—Alec Wilson & Jim Johnson 91; **Blind Bogey**—Fabris, Wilson and Mac Jennett 79; **Hole in One**—Ray Brown 10 feet 4 inches; **Club Champion**—Ray Brown.

FIELD HOUSE—Tacoma, Wash.

(From Page 25)

Entrance and exit facilities have been so designed that crowds are kept off the playing floor at all times. All doors in the building are flush type native hardwoods equipped with safety bars inside. Two coats of paint have been applied to the exterior of the building to provide both beauty and waterproofing protection.

Mechanical engineering on the building was done by C. W. May and electrical engineering by J. A. Travis, both of Tacoma. A firm of Tacoma engineers, Smith and Murray, did the structural engineering. General contractor was another Tacoma firm, Roy T. Early Company.

The building has become almost overnight the community center for Tacoma activities. Even before it was completed and while painters and mechanics were still working, the women of Tacoma moved in to decorate and lay out tables, display cases and mock gardens for a flower show and as that moved out and while the building was just getting its finishing touches the Shriners moved in with a community circus.

College of Puget Sound Field House combines simplicity of design with full functionalism and the end result is a building of striking appearance and complete usability.

LARGE ENOUGH SERVICE ENTRANCE?

The worried waiter, struggling to wedge a big load through a small entrance, illustrates what happens in poorly planned homes where the electric service entrance is too small.

When Mr. and Mrs. Homeowner want to add an electric range, air conditioner or power tools, they find an expensive alteration is required before extra circuits can be installed.

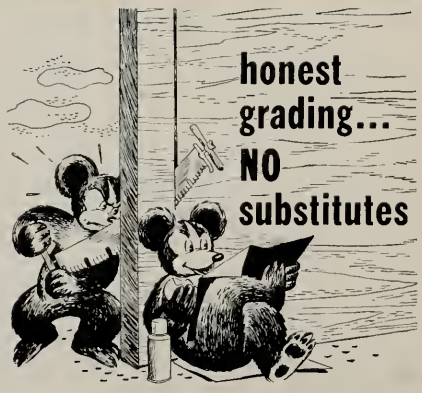
Certified Adequate Wiring eliminates this costly nuisance by providing a large enough service entrance to supply both existing requirements **and** future requirements which reasonably may be expected.

When you plan wiring installations, specify **Adequate** wiring. Then your clients will live happily ever after. And satisfied clients are your most valuable business assets.

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street, San Francisco 3

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK
Specify it in your home
Available through Lumber Dealers
LOS ANGELES
601 W. 5th Street
Phone MIchigan 6294
SAN FRANCISCO
333 Montgomery Street
Phone DOuglas 2-3883
J.H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.



E. K. WOOD LUMBER CO.
GENERAL OFFICES: P. O. Box 1618, Oakland, California
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

HEADLINE NEWS & VIEWS

By E. H. W.

DURING the first quarter of 1949 the tonnage o raw steel poured from steel-making furnaces in the U. S. was sufficient to provide every man, woman and child in the United States with 326 pounds o steel.

* * *

THE plate mill erected at Coatstown, Pa., in 1816, powered by an overshot waterwheel, was the first to roll iron boiler plate in America.

* * *

THE automotive industry during 1949 received from American steel mills the largest tonnage o steel for any year in the history of the automobile business.

* * *

THE Board of Directors of the San Francisco Chamber of Commerce recently approved a proposal for increased production of California State Prison made goods—goods that are produced in direct competition with private industry. Perhaps the Board also advocated a program which will assure ample employees to operate the state's manufacturing plants!

* * *

MORE than 24,000,000 faucets in American homes have outlived their usefulness and should be replaced, according to the Plumbing & Heating Industries Bureau.

* * *

PUBLIC demand for "contemporary style" in new homes is increasing, according to a recent survey conducted by the National Association of Home Builders.

* * *

MORE than 3,250,000 people have found new homes in England since the war, at an average weekly rental of from $2.40 to $3.60—But, a government subsidy is also paid.

* * *

LAST year's industrial injury rates, released by the National Safety Council, show a reduction of 13 per cent as compared with 1947.

* * *

THE combined steel production of England and Russia for 1948 represents but 40 per cent of the steel produced in the United States:—Walter S. Tower, President, American Iron & Steel Institute

* * *

EACH year it becomes more difficult for an individual to establish his own business:—Wright Patman, Representative in Congress from Texas

* * *

MAINTAINING its 8-year record, San Francisco has more telephones than any other American city.

IN THE NEWS

NEW HOUSES

Announcement has been made of the construction of a group of 24 residences in San Lorenzo, Alameda county, by C. H. McEntyre at a cost of $7,150 each.

Frame construction will be used.

BONDS DEFEATED

The voters of Healdsburg recently defeated a proposed bond issue of $190,000. Funds were to be used for the construction of a new 7-room, kindergarten, and office Grammar School.

J. Clarence Felciano of Santa Rosa is the architect.

NEW HOME PROJECT

The Asland Homes of San Leandro (Alameda county) have started construction of a group of residences in nearby Castro Valley consisting of 17 homes to cost $6,350 each, and another group of 12 homes which will cost $7,200 each.

The houses are of frame construction.

REPRESENTATIVE

J. C. van Groos, West Coast representative for The Superior Electric Company of Bristol, Conn., has moved to 1436 N. Serrano Avenue, Hollywood, California.

A branch office is maintained in San Francisco at 210 Post Street, in charge of Poul A. Williams, Electrical Engineer.

NAMED MANAGER

J. R. Thompson, manager of the Denver district of Industrial Product Sales for The B. F. Goodrich Company, has been named manager of the flat belting department with offices in Akron, Ohio.

ARCHITECT SELECTED

The Tahoe-Truckee Joint Unified School District, Truckee, has announced the selection of Gordon Stafford, Architect, of Sacramento to design a group of new High School Buildings near Truckee, Nevada County.

ZONING PERMIT

A permit has been granted to the Peninsula Young Mens Christian Association, Burlingame, for the construction of a new Y. M. C. A. Building in San Mateo. Estimated cost of new building is $170,000.

SPEAKS AT STANFORD

Kenneth F. Park, earthmoving engineer of San Leandro, recently addressed a class of student-engineers at Stanford University on the subject of "Earth-moving Equipment".

BONDS DEFEATED

The voters of the Gonzales Union High School District of Monterey county, have rejected a proposed $350,000 bond issue for the purpose of constructing an addition to the local High School.

EUREKA SCHOOL. A contract has been awarded the Baldwin, Straub Corporation of San Rafael for the construction of a $206,300 addition to the Franklin Grammar School and the Jefferson Grammar School in Eureka, California. Mason and Hurd, San Francisco, are the architects.

This new instant start Slimline INDUSTRO-LITE is just one of many Smoot-Holman developments in the field of lighting — 425 ma. with more lumens per foot.

Offices in Principal Western Cities • Branch and Warehouse in San Francisco

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CEDARWALLS
WONDER-COTE PROCESS
Red Cedar Shingle Sidewalls
9 attractive colors and white.
Machine grooved and carton packed at Factory.
Write for Name of your Local Dealer
SIDEWALL LUMBER CO.
1994 Oakdale Ave. San Francisco 24 ATwater 2-8112

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

NEWS AND COMMENT ON ART

(From Page 9)

Street, San Francisco, is conducting a Summer Session in the Fine Arts with classes including oil paintings, landscape, portrait and watercolors, and advanced oil. Drawing and Composition, Life Drawing, Design and Color, Lithography, Engravings, Illustrations and Advertising Art, and the plastic mediums of Sculpture, Design, Ceramics and Jewelry Design.

JAMES D. PHELAN AWARDS IN ART

The Trustees of the late Senator James D. Phelan have announced that three awards will be offered this year in painting. The first $1,000; second, $650; and the third, $350.

Paintings submitted will be on exhibition at the San Francisco Museum of Art from September 1 to October 2, 1949. Applicants must be native born Californians between the ages of 20 and 40 years.

The award committee will consist of Spencer Macky, president of the California College of Arts and Crafts, Maurice Logan, well known San Francisco painter, and a third member to be announced later.

EDUCATION BUILDING

The First Presbyterian Church in Berkeley has awarded a general contract to Oliver and Colburn of Berkeley, for the construction of a 2-story reinforced concrete Education Building at a cost of $141,769.

Donald P. Smith, San Francisco, is the architect.

EXPANSION

Over $4,734,000 was expended in northern California and the Bay Area for industrial development during December 1948, according to a recent report of the Industrial Department of the San Francisco Chamber of Commerce.

The figure represents the expansion of 27 plants at $3,584,300 and the establishment of 25 new enterprises totaling $1,150,100.

SCHOOL BONDS

Voters of the Quincy Elementary School District have approved a bond issue of $226,000 with funds to be used for the construction of a new grammar school. Leonard F. Starks, Sacramento, is the architect

CONVENT: Carrico and Gautier, San Francisco, have been awarded a $66,479 contract for the construction of a Convent in the St. Mary Magdalene Parish, Berkeley. Arnold Constable, Sausalito, is the architect.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

FAMILY HOUSING. By Deane G. Carter and Keith H. Hinchcliff. John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16. Price $4.00.

The authors are both experienced in the field of housing and farm structures and their more than 20 years experience is incorporated in "Family Housing". The book is written in a language easily understandable by the non-technical trained and contains many illustrations which are of value in the house planning approach to any housing problem.

Farm construction, remodeling, construction materials, equipment, and costs are given considerable prominence by the authors as is a step-by-step discussion of building, buying, and financing a home.

Authors Deane G. Carter and Keith H. Hinchcliff are both associated with the University of Illinois. Carter is Professor of Farm Structures, and Hinchcliff is now Assistant professor.

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

110. CONCRETE FORMING SYSTEM

Catalog covering complete uses and adaptations of Uni-Forms has been released by the Universal Form Clamp Co. Is well illustrated; describes case histories and explains the advantages and improvements obtained by the use of these cement forms, which are engineered to be completely accurate and can be used from job to job without replacement. S. A.-17, 32 pages illus. 4/49.

111. ROCK CORK INSULATION

Johns-Manville's new four page folder entitled, "Rock Cork Insulation", provides essential data on size, temperature limits, conductivity, moisture absorption and similar information. Also included are suggested uses for Rock Cork which comes in the form of sheets, lagging and pipe insulation.

112. KITCHEN PLANNING

"Planning Book for Electrical Living Homes" by the Better Homes Bureau of Westinghouse Electrical Corporation. In the booklet are illustrations of exteriors and interiors, floor plans, and wiring diagrams of four Electrical Living Homes constructed in New England to show how basic formulas were put into actual practice. The booklet provides information on proper planning of kitchens in which work centers of modern electrical equipment, storage cabinets and counter surfaces are arranged for a smooth flow of work. A.I.A.—31, 24 pages illus. 4/49.

113. ACCESS PANELS

A new four page folder shows how to quickly install access panels for metal lath, wood lath, marble, tile and plastered openings. There are many features in this flush fitting access panel which include a novel removable type hinged door with automatic blackout device. The panels are manufactured by the Watson Manufacturing Co. 4 pages illus.

114. COLOR IS HOW YOU LIGHT IT

"Color is How You Light It", a new booklet reporting the results of a comprehensive study by Sylvania Electric Products Inc. on the effect of artificial light on color.

ARCHITECT AND ENGINEER,
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

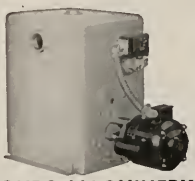
110 111 112 113 114

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after

(August 15th.—A. & E.)

"AMERICAN - MARSH"
CONDENSATION UNIT

Pumping Machinery for Every Purpose



For Service Call DOuglas 2-6794 or MUtual 8322

SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834
GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer
REPUBLIC STEEL
See Sweet's Catalog File or write us for full information.
REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO
DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. 5-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

IN THE NEWS

RESIDENCES

Henry Doelger, one of the nation's larger home builders, has started construction of 32 residences in the new Westlake Tract near Daly City (California) at an approximate cost of $9,000 per house.

The homes are to be of frame and stucco construction.

NEW FIREHOUSE

The City of Sunnyvale (California) has appointed Ned H. Abrams, Architect, of the same city, to prepare plans for a firehouse and sub-station firehouse. Cost of the project is estimated at $70,000.

PLASTICS AWARD

The John Wesley Hyatt Award for distinguished achievement in plastics was recently awarded to Dr. George T. Felbeck of New York City. He received the award and $1,000 in cash at the annual meeting of the Society of the Plastics Industry.

Members of the 1948 award committee included George H. Clark, president, Society of the Plastics Industry; Dr. Linus Pauling, president, American Chemical Society; Dr. Charles F. Kettering, vice president, General Motors Corp'n; Dr. Edward R. Weidlein, director, Mellon Institute of Industrial Research; Mr. Cochrane; Deane Bach; and Dr. Wendt.

MORRISON-KNUDSEN CO.

Lyman Wilbur, chief engineer, of the Morrison-Knudsen Company, Inc. of Boise, Idaho, was one of the speakers recently appearing before the Department of Interior Sub-Committee of the United States Senate Appropriations Committee, adocating the letting of competitive bids by the U. S. Bureau of Reclamation, rather than at tempting to do the work itself.

AIR CONDITIONING EXPO

The Southwest Air Conditioning Exposition of the International Heating and Ventilating Exposition will be held in Dallas, Texas, January 23-27, 1950, according to an announcement by Charles F. Roth, president of the International Exposition Company.

NEW CEILING SHUTTER

A new type ceiling shutter with mercury switch that synchronizes starting and stopping of fan with opening and closing of shutter has been announced by ELGO SHUTTER & MFG. CO., 238 W. Warren Ave., Detroit, Mich.

The unit is adapted to vertical and horizontal discharge of air and may be used in unit or single installation.

RACE TRACK ADDITION

The California Jockey Club, Inc. have started work on construction of an addition to the Grandstand and Club House at the Bay Meadows Race Track in San Mateo county which will represent an investment of about $700,000.

Improvement plans also include a new Turf Club and several new horse barns.

BLOWER TYPE HEATER

A new blower unit type heater which features a squirrel cage fan has been announced by the AUTOMATIC GAS EQUIPMENT CO., of Pittsburgh, Pa.

Known as the Pittsburgh Blower Unit, Series "CB", it is designed for installations requiring heated air at great velocities and static pressure. Available in five sizes. Complete information available from manufacturer.

BIDS REJECTED

The Roman Catholic Bishop of Fresno-Monterey Diocese, Fresno, has rejected a bid of $56,000 for the construction of a church in Hilmar, California.

Harold H. Weeks and John W. Gloe, *Architects*
Parker, Steffens & Pearce, *General Contractors*
George W. Reed, *Masonry Contractor*

CERAMIC VENEER PROVIDES DIGNITY...*plus!*

Lending dignity at moderate cost is axiomatic with Adhesion Type CERAMIC VENEER Terra Cotta. Illustrating this fact is the new Marine Firemen's Building in San Francisco. A new high in organization headquarters buildings...this example emphasizes the wisdom of choosing this modern facing material *on any building* where dignity, permanence and ease of maintenance are important factors. To be sure... specify Adhesion Type CERAMIC VENEER Terra Cotta on your next job demanding these qualities. For further information write...

Recent Contracts also using CERAMIC VENEER...

Rosemead High School
El Monte, California

Tillamook County Hospital
Tillamook, Oregon

Mutual Telephone Building
Honolulu, Hawaii

Dilworth Elementary School
Salt Lake City, Utah

Bennetts Pharmacy
Burlingame, California

N. CLARK & SONS
Division of
Pacific Clay Products
605 MARKET STREET • SAN FRANCISCO 5, CALIFORNIA

PACIFIC
Los Angeles
Portland
Salt Lake City

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$31.00 per M—truckload lots, delivered.

Face Brick—$80.00 to $105.00 per M, truckload lots, delivered.

Fire Brick—$90.00 to $125.00 per M, truckload lots, delivered.

Cartage—Approx. $9.00 per M.

Paving—$75.00.

BUILDING PAPER & FELTS

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.20
30-lb. roll	2.93
Compcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$3.13
Deadening felt, 1-lb.	3.69
Asphalt roofing, 15 lbs.	2.40
Asphalt roofing, 30 lbs.	3.60
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$1.75
Medium	2.04
Heavy	2.40
Extra Heavy	2.77

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	$4.75
Nails, per keg, base	$11.00
8-in. spikes	10.55
Rim Knob lock sets	1.85
Butts, dull brass plated on steel, 3½x3½	73c

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock ¼" to ¾"	2.38	2.94
Crushed Rock ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	3.50
River Sand	2.50	3.06
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.38 per bbl. f.o.b. car; delivered $3.60.

Per 5ack, small quantity (paper) .. $1.00

Carload lots, in bulk per bbl. .. 3.00

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White — 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

1-2-4 mix, to 10 yards*	$11.75
10 to 100 yards*	10.75
Over 100 yards*	10.25

* Delivered to site.

Concrete Blocks—	Haydite	Basalt
4x8x16-inches, each	$.16	$.16
6x8x16-inches, each	.21	.21
8x8x16-inches, each	.25	.25
12x8x16-inches, each	.33	.60
12x8x24-inches, each		.60

Haydite Aggregates—

⅜-inch to ⅛-inch, per cu. yd	$6.50
⅜-inch to ⅞-inch, per cu. yd.	6.50
⅞-inch to 0-inch, per cu. yd.	7.00

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. ¾"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

⅜ x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

⅜ x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

⅜" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .35 per □ ft.
Double Strength Window Glass	.50 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
Polished Wire Plate Glass	2.50 per □ ft.
Rgh. Wire Glass	.65 per □ ft.
Obscure Glass	.45 per □ ft.

Glazing at above is additional.

Glass Blocks—$2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness
(3½") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common..... $85.00 per M
No. 2 Common..... 83.00 per M
Select O. P. Common..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	18c to 20c per ft.
Plyscord	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$13.00 per square; No. 2, $10.50; No. 3, $9.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—Taperad: ½ " to ¾" x 25"—$17.00 per square.
Resawn: ¾" to 1¼" x 25"—$22.00 per square
Average cost to lay shakes,— 8.00 per square

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, Copper Bearing, per carloads, per 100 sq. yds..... $36.50
Standard Ribbed, ditto..... 38.50

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine..... $1.85 per gal. in 5-gal. cont.
Raw Linseed Oil..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Seilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.

Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
Redwood Shingles, $15.00 per square in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ..... $18.25 square
5/8 x 16"—#1 Cedar Shingles, 5" Exposure ..... $18.00 square
4/2 #1-24" Royal Shingles, 7½" Exposure ..... $23.00 square
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $24.0
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $29.0
1 x 25" Resawn Cedar Shakes, 10" Exposure 22.0
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton..... $99.5
Vitrified, per foot:
Standard, 8-in..... .6
Standard, 12-in..... .8
Standard, 24-in..... 4.5
Clay Drain Pipe, per 1,000 L.F. in carload lots:
Standard, 6-in..... 219.0
Standard, 8-in..... 365.0

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardwa $2.80 per sq. ft., size 12'x12'. $3.75 p sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvanized iron, 65c sq. ft. (flat).
Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mi
$270 per ton erected, when out of stoc

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd.	$7.
⅜-in. Rd.	6.
½-in. Rd.	6.
⅝-in. Rd.	6.(
¾-in. & ⅞-in. Rd.	6.(
1-in. & up	5.

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.75 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$2.00 per sq. ft.
Asphalt Tile Floor ⅛" x ✱"—$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—
Glazed Terra Cotta Wall Units (single face laid in place—approximate prices:

2 x 6 x 12	$1.25 sq.
4 x 6 x 12	1.50 sq.
2 x 8 x 16	1.45 sq.
4 x 8 x 16	1.75 sq.

Building Tile—

8x5½x12-inches, per M	$139
6x5½x12-inches, per M	105
4x5½x12-inches, per M	84

Hollow Tile—

12x12x3-inches, per M	$124
12x12x4-inches, per M	139
12x12x0-inches, per M	176

VENETIAN BLINDS—

75c per square foot and up. Installatio extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

NEW INDUSTRIAL PRODUCTS BUILDING—W. P. Fuller Co.

(From Page 16)

which is typical of the stairways throughout the rest of the building. The offices and Control Laboratory as well as various tanks, storage space for raw materials, mill loading ports for use of materials preliminary to supplying the ball mills on the floor below, and employee accommodations such as shower rooms, locker rooms and washrooms in colored tile, are also located on the third floor. The walls and ceilings have been done in Surf and let-down Production Green finish.

The second floor contains some of the major paint manufacturing machinery and location of the equipment has been laid out with geometrically precise planning. One large belt conveyor carries 5-gallon kegs from this to the first floor, while another specially designed gravity roller conveyor takes 1-gallon cans to the labeling machines which are also located on the ground floor. This floor also provides washrooms, showers, and lockers for workmen.

Activities on the first floor is devoted to the final stages of the paint manufacturing business. Here the packaging machines, the labeling machines, and the shipping department is located. Facilities have also been provided for necessary storage and employee lockers.

The electrical wiring is all underground and centers in a special building which is attached to the main factory building, but can not be entered except from outside the main structure.

The new building is served by three elevators and special provision for addition of new equipment, or shifting of large equipment from one place to another, is made easy by large doors and openings that preclude the necessity of removing walls.

PRESS BUILDING

J. H. Vienop, Napa, has been awarded a contract for the construction of a press building for the Napa Register at a cost of $27,000. Ed R. French, is the architect.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to April, 1949.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	Santa Clara	Solano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	3.00	2.81¼	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.12½	2.12½	2.12½	2.12½	2.13½	2.12½	2.0375	2.0375	2.0375	2.0375	2.1125
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.2375	2.2375	2.2375	2.2375	2.2375
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.00*	2.50*	2.81¼	2.81¼	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.2375	2.2375	2.2375	2.2375	2.2375
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.50*	2.81¼	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.16	2.16	2.16	1.87½	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81¼	2.81¼	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.00	2.67½	2.67½	2.43¾	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

IMPORTANT INFORMATION pertaining to the construction industry throughout northern California is contained in the DAILY REPORTS. Subscribe NOW only $10 per month. ARCHITECTS REPORTS, 68 Post Street San Francisco.

GET THE BEST, don't be satisfied with anything but the best. Window sash, Doors, Cabinets, etc. Town Talk Sash & Door Mill, 24 9th St., Sacramento.

WANTED! A market for the complete output of a sizeable redwood shingle mill; Write Box W, Architect & Engineer, 68 Post Street, San Francisco.

ADVERTISERS wishing to sell building materials and products, GET THE BEST RESULTS from regular advertising schedules in ARCHITECT & ENGINEER magazine. Write for complete information, including rates, circulation, etc., 68 Post Street, San Francisco.

FLOOR COVERINGS for industriel, commercial, and residential construction. Complete lines, one of the oldest, best established organizations in the Sacramento Valley. LATTIN'S, INC., 1519 Alhambra Blvd., Sacramento.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

SAN LEANDRO, Alameda Co.: Oakland Board of Education, owner; shop building reconversion, San Leandro Senior High School, $74,824. ARCHITECT: Miller & Warnecke, Oakland; demolition, alteration and addition to existing shop building. GENERAL CONTRACTOR: W. Vernon Bernard, Oakland.

SAN LEANDRO, Alameda Co.: McKissick Motor Co., owner; auto sales and service building, $40,000. ENGINEER: J. Y. Long Co., Oakland; 1 story and mezzanine, reinforced concrete and wood roof trusses. GENERAL CONTRACTOR: M. Drinkward, Oakland.

SAN LEANDRO, Alameda Co.: Friden Calculating Machine Co., owner; factory addition, office warehouse and pump house, $38,000. ARCHITECT: F. H. Reimers, San Francisco; brick and frame construction. GENERAL CONTRACTOR: Donald Whalin, Oakland.

SAN LEANDRO, Alameda Co.: General Foods Corp., owner; factory and warehouse buildings, $1,000,000. STRUCTURAL ENGINEER: H. J. Brunnier, San Francisco; factory: 3 story, 180'x170'; reinforced concrete construction; steel or aluminum sash, 1 freight elevator; warehouse, 1 story; 210' x320'; reinforced concrete construction. GENERAL CONTRACTOR: Swinerton & Walberg, Oakland.

TULARE, Tulare Co.: Tulare Board of Education, owner; Maple Grammar School Building, $234,377. ARCHITECT: Walter Wagner, Fresno; 12 classrooms, 2 kindergartens, offices and toilet rooms; reinforced concrete and frame construction, radiant heating. GENERAL CONTRACTOR: Flowers & Shirley, Tulare.

VALLEJO, Solano Co.: Times-Herald Publishing co., owner; newspaper building remodel, $25,637. ARCHITECT: Ray F. Keefer, Oakland; interior remodel and new ceramic veneer and plate glass front. GENERAL CONTRACTOR: Solano Builders, Vallejo.

WEAVERVILLE, Trinity Co.: County of Trinity, owner; county hospital, 20 beds, $251,000. ARCHITECT: O. A. Delchmann, San Francisco, reinforced concrete and frame construction; 1 story and basement. GENERAL CONTRACTOR: H. W. Robertson, Sacramento.

WOODLAND, Yolo Co.: City of Woodland, owner; fire house, $16,000. ARCHITECT: Barovetto & Thomas, Sacramento; 1 story, reinforced concrete construction, brick veneer. GENERAL CONTRACTOR: Continental Construction Co., Sacramento.

STOCKTON, San Joaquin Co.: — Sprouse-Reitz Co., lessee; store building; $41,784. ARCHITECT, John W. Bamberger, Modesto; 1 and 2 story, 60'x128'; 2nd story, 28'x60'. Reinforced concrete and concrete block and frame construction. GENERAL CONTRACTOR, Nomellini Construction Co., Stockton.

STOCKTON, San Joaquin Co.: — Stockton Board of Education, owner; Franklin High School Buildings, 28 classrooms, science and home economics auditorium, theatre, administration, cafeteria, 4 gymnasiums, natatorium, library and 4 shop buildings, $2,269,488. ARCHITECT: Jos. L. Lasekann, Stockton; 1 and 2 story; Class A; reinforced concrete. GENERAL CONTRACTOR, Barrett & Hilp, San Francisco.

STOCKTON, San Joaquin Co.: State of California, owner; Stockton State Hospital, ward building for female patients, warehouse building and garage building, demolition of 3 and 4 story building; $851,450. STATE ARCHITECT: Anson Boyd, Sacramento; 1 and 2 story; approximately 47,000 sq. ft.; reinforced concrete construction, steel sash, plastered partitions and tile roof. Warehouse: 1 story and basement, 50'x135'; reinforced concrete construction. Garage: 1 story, 60'x144', metal covered. GENERAL CONTRACTOR: Nomellini Construction Co., Stockton, $742,000. ELECTRICAL WORK: Collins Electric Co., Stockton, $21,373.— PLUMBING: Scott Co., Oakland, $44,623. HEATING & VENTILATING: R. A. Currie Heating Co., San Anselmo, $43,454.

FRESNO, Fresno Co.: State of California, owner; live stock building, $135,518. STATE ARCHITECT: Anson Boyd, Sacramento; 150x240 pipe column supports, wood rafters, corrugated metal roof, bitumul floor. GENERAL CONTRACTOR: Harris Construction Co., Fresno.

FRESNO, Fresno Co.: County of Fresno, owner; county general hospital, nurses home building, 75 nurses, $373,970. ARCHITECT: Fred L. Swartz and Wm. G. Hyberg, Fresno; 2 story, reinforced concrete, brick (Roman) exterior, air conditioning, 2 snack bars. GENERAL CONTRACTOR: Midstate Construction Co., Fresno, $279,333. HEATING & VENTILATING: Dowd Sheet Metal Works, Fresno, $46,777.— PLUMBING: Frank Hudson, Fresno, $24,747. ELECTRIC WORK: Modern Electric Co., Fresno, $23,113.

FRESNO, Fresno Co.: County of Fresno, owner; county shops building, $132,000. ARCHITECT: Walter Wagner, Fresno; 1 story, 33,000 sq. ft.; concrete block, structural steel roof trusses, radiant heating. GENERAL CONTRACTOR: Lewis C. Nelson, Selma.

BERKELEY, Alameda Co.: Thousand Oaks Baptist Church, owner; Sunday School building, $27,714. ARCHITECT: D. P. Smith, San Francisco. GENERAL CONTRACTOR: Joel Johnson & Son, San Francisco.

PALO ALTO, Santa Clara Co.: Palo Alto Board of Education, owner; Crescent Park Grammar School addition, 7 classrooms. ARCHITECT: Birge M. Clark and Walter Stromquist, Palo Alto; frame and stucco construction. GENERAL CONTRACTOR: Carl N. Swenson Co., Stockton.

BURLINGAME, San Mateo Co.: Carr McClellan & Ingersoll, owner; store and office building, $41,560. ARCHITECT: Sharps & Brown, Burlingame; 1 story, 50'x100', reinforced concrete and frame construction. GENERAL CONTRACTOR: Conway & Culligan, South San Mateo.

SAN FRANCISCO, San Francisco Co.: S. F. Brewing Co., owner; stockhause building, $400,000. STRUCTURAL ENGINEER: Ray N. Moore, San Francisco; 4 story; 100'x100'; reinforced concrete and structural steel construction. 1 freight elevator. GENERAL CONTRACTOR: Cahill Construction Co., San Francisco.

SAN FRANCISCO, San Francisco Co.: Morris Plan Co., owner; office building remodel, $100,000. ARCHITECT: Edgar B. Hurt, San Francisco; 7-story building; marble exterior, granite base, new steel sash, some interior remodel, new elevator fronts, etc. GENERAL CONTRACTOR: Dinwiddie Construction Co., San Francisco.

SAN FRANCISCO, San Francisco Co.: Theo. G. Meyer & Sons, owner; apartment building, $75,000. ARCHITECT: H. C. Baumann, San Francisco; 3 story frame construction, 12 apartments.

NAPA, Napa Co.: Hugo A. Zeller, owner; store building, $24,497. ARCHITECT: Ed R. French Jr., Napa; 1 story, 27'x120'; block and frame construction. GENERAL CONTRACTOR: A. A. Douglas, Napa.

ALAMEDA, Alameda Co.: Alameda Board of Education, owner; Longfellow Grammar School Addition, 12 classrooms, domestic science and manual training, multi-use room and toilet rooms, $260,014. ARCHITECT: Kent & Hass, San Francisco; 1 and 2 story, reinforced concrete and frame and stucco construction. GENERAL CONTRACTOR: Christensen & Lyons, Oakland.

AGNEW, Santa Clara Co.: State of California, owner; commissary warehouse, $24,400. STATE ARCHITECT: Anson Boyd, Sacramento; 80'x200; rigid steel, trusses and corrugated metal siding and roof; concrete foundations, floor slab. GENERAL CONTRACTOR: Homer W. Goldman, Salinas.

BERKELEY, Alameda Co.: Baptist Divinity School of Berkeley, owner; chapel, $82,000. ARCHITECT: Ratcliff, Haymond & Ratcliff, Berkeley; reinforced concrete, brick and stone and frame construction. GENERAL CONTRACTOR: W. H. Connor, Berkeley.

BURLINGAME, San Mateo Co.: Burlingame Elementary School District, owner; new Grommar School, 5 classrooms and kindergarten, $105,771. ARCHITECT: James H. Mitchell, San Francisco; frame and stucco construction. GENERAL CONTRACTOR: Theo. G. Meyer & Son, San Francisco.

BURLINGAME, San Mateo Co.: City of Burlingame, owner; drill tower, $14,415. ARCHITECT: Sharps & Brown, Burlingame; 4 story frame construction, redwood exterior. GENERAL CONTRACTOR: Moody J. Henry, Burlingame.

SAN FRANCISCO STATE COLLEGE, San Francisco: State of California, owner, one building, $886,224. STATE ARCHITECT: Anson Boyd, Sacramento, 1 story and basement; reinforced concrete construction, steel sash, metal covered and composition roof; gyms and swimming pool, boilers not included, floor area approximately 75,000 sq. ft. GENERAL CONTRACTOR: Empire Construction Co., San Francisco, $742,000. ELECTRIC WORK: Geo. F. Brayer Co., San Francisco, $40,769; PLUMBING: Scott Co., San Francisco, $66,555; HEATING AND VENTILATING: O'Mara & Stewart, San Francisco, $36,900.

CHOWCHILLA, Madera Co.: Chowchilla Elementary School District, owner; Monterey School, $26959. ARCHITECT: Frank Wynkoop & Assocs., Fresno; frame and stucco construction. GENERAL CONTRACTOR: Graham & Jensen, Merced.

EUREKA, Humboldt Co.: Auto Sales Building; Carl Gustafson, owner, $108,923. ARCHITECT: Ernest F. Winkler, San Francisco; 1 story, 16,500 sq. ft., reinforced concrete, structural steel rool trusses; wood roof; plate glass front, steel sash. GENERAL CONTRACTOR: Mercer-Fraser Eureka.

MODESTO, Stanislaus Co.: Grammar School; Modesto Board of Education, owner; 10 classrooms, kindergarten, office and toilet rooms, $206,925. ARCHITECT: Swartz & Hyberg, Fresno; frame and stucco construction. - GENERAL CONTRACTOR: Goodenough Construction Co., Stockton.

MODESTO, Stanislaus Co.: High School; Modesto Board of Education, owner; units 4 and 5, $79,178. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Spears Construction Co., Modesto.

TRACY, San Joaquin County: High School addition: Tracy Union High School District, owner; 4 classrooms, home making unit, gymnasium, locker building, bus garage, $524,000. ARCHITECT: Kump & Falk, San Francisco; structural steel frame and frame and stucco construction. Gymnasium: reinforced concrete and structural steel construction. GENERAL CONTRACTOR: M. A. Little, San Francisco.

HILMAR, Stanislaus County: Church; Roman Catholic Bishop of Fresno, owner, $46,000. ARCHITECT: Vincent Buckley, San Francisco; frame and stucco construction, tile roof. GENERAL CONTRACTOR: Eston L. Jordan, Los Banos.

STOCKTON, San Joaquin County: Fire House: Eastside Rural Fire District, owner, $22,828. ENGINEER: Carl Heynen, Stockton; block and frame construction. GENERAL CONTRACTOR: Don W. Clark, Stockton.

NAPA, Napa County: Dehydrator; Napa Coop. Dryer, owner, $30,000. ENGINEER: T. H. Townsend, Napa; 1 story, 48x112; block construction. GENERAL CONTRACTOR: W. S. Brickford, Napa.

SAN LEANDRO, Alameda County: Store Building; 3 stores, $25,000. ARCHITECT: John B. Anthony, Oakland; 1 story and mezzanine, 60x60, brick and frame construction. GENERAL CONTRACTOR: Anderson-Hoglund, Inc., Oakland.

VALLEJO, Solano County: Cleaning Plant; Marvin W. Brewer, owner, $19,296. ARCHITECT: Milton Latham, Vallejo; 1 story reinforced concrete and frame construction. GENERAL CONTRACTOR: J. A. Bryant, Vallejo.

LAFAYETTE, Contra Costa County: Residence; John M. Campbell, owner, 6 rooms and 2 baths, $19,900. ARCHITECT: Geo. E. Ellinger, Oakland; frame, brick veneer and shake construction. GENERAL CONTRACTOR: W. H. Wisheropp Co., Oakland.

PETALUMA, Sonoma County: Grammar School, Lateville Elementary School District; owner, 1 classroom & toilet rooms, $11,333. ARCHITECT: C. A. Caulkins, San Rosa, frame & stucco construction. GENERAL CONTRACTOR: Vogensen Construction Co., Petaluma.

SAN MATEO, San Mateo County: Auto Laundry. ARCHITECT: Cecil S. Moyer, Oakland, 1 story, concrete & frame construction, $25,000. GENERAL CONTRACTOR: Edwin Swanson, Redwood City.

SAN JOSE, Santa Clara County: Theater Building; Jos. Brady, owner, 1200 seats & 4 stores, $250,000. ARCHITECT: A. A. & A. Mock, Cantin, San Francisco, reinforced concrete & structural steel roof trusses. GENERAL CONTRACTOR: Salih Bros., San Francisco.

SARATOGA, Santa Clara County: Residence, Weslye Hancock, owner, 10 rooms 3 baths, $52,000. ARCHITECT: Kress & Gibson, San Jose; 1 story, frame construction, some stone veneer. GENERAL CONTRACTOR: A. L. Jensen, Los Gatos.

YREKA, Siskiyou County: Grammar School, Yreka Elementary School District, owner, 14 classrooms, 2 kindergartens, offices & toilet rooms, $297,449. ARCHITECT: Chas. F. Dean, Sacramento; reinforced concrete construction & frame. GENERAL CONTRACTOR: Younger & Hallsteen, San Francisco.

YUBA CITY, Sutter County: High School, Yuba City High School District, owner, home making unit, $62,180. ARCHITECT: Chas. F. Dean, Sacramento; frame & stucco construction. GENERAL CONTRACTOR: McCoy & Butler, Yuba City.

Grammar School Addition — **PARADISE,** Butte County: Grammar School, Chico Board of Education, owner; 5 classrooms & toilet rooms, $65,354. ARCHITECT: Chas. F. Dean, Sacramento, frame & stucco construction. GENERAL CONTRACTOR: Modern Building Co., Chico.

NORTH SACRAMENTO, Sacramento County: North Sacramento Elementary School District, owner; 6 classrooms, kindergarten & toilet rooms, $92,800. ARCHITECT: Koblik & Fisher, Sacramento, frame & stucco construction. GENERAL CONTRACTOR: United Construction Co., Sacramento.

MERCED, Merced County: Armory Building, State of California, owner; Type A armory, $65,557. STATE ARCHITECT: Anson Boyd, Sacramento; 1 story, approximately 11,000 square feet, reinforced concrete walls & floors, reigid steel bents, steel sash, wood roof, composition roofing. GENERAL CONTRACTOR: Leslie Fitchett & Son, Merced.

VISALIA, Tulare County: Bank Building, Security First National Bank, owner; $121,800. ARCHITECT: Walter Wagner, Fresno; reinforced concrete construction. GENERAL CONTRACTOR: R. H. Hougham, Hanford.

SACRAMENTO, Sacramento County: Apartment, Jere Strizek, Inc., owner; 120 apartments, $1,000,000. ARCHITECT: Herbert E. Goodpastor Sacramento; 2 story, frame & stucco construction.

NAILOCK
ACOUSTI LOCK BOARD
ACOUSTI-CELOTEX
...the Latest and
Best System of
Installing Suspended
Ceilings for
Acoustical Treatment

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Concealed wiring and extra outlets are a bargain buy

Good tip for making a client happy is to include low-cost concealed wiring and extra telephone outlets in your plans. That means telephones can be moved or extensions added later on—inexpensively—without drilling holes or running wires along the baseboard.

Bedrooms, the kitchen and living room are excellent locations for built-in outlets. That's where home owners will spend most of their time... now and in the future. *For free help in planning, call your local Pacific Telephone and Telegraph office and ask for "Architects and Builders Service."*

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

IN THE NEWS

BONDS DEFEATED

The voters of Colusa County (California) recently rejected a proposed bond issue of $500,000 which would have provided funds for the construction of a new county hospital, a new county library, and an addition to the county jail.

ARCHITECTS SELECTED FOR SAN FRANCISCO SCHOOLS

The San Francisco Board of Education has announced the selection of architects for designing four elementary schools in the City of San Francisco.

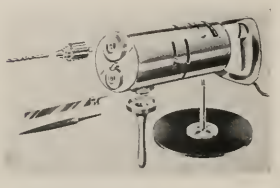
Architects Eldridge T. Spencer and Wm. C. Ambrose will design the Sunnydale Elementary School to cost $600,000.

The architectural firm of Masten & Hurd will design the new Mira Loma Elementary School which will cost $750,000; and

Architects Ward and Bolles will design the Sunset Elementary School which will cost an estimated $900,000 to construct.

SMILAN PORTABLE ELECTRIC TOOL

A new multi-purpose, portable electric tool for maintenance men, carpenters, plumbers, electricians, garages, and aircraft factories has been announced by the SMILAN TOOL CO., 2848 West Pico Blvd., Los Angeles.



Used for drilling, sawing, filing, sanding, polishing and building on wood or metal; operates on 110 volt AC-DC motor with trigger switch. Complete information on this new low cost tool available from manufacturer.

BONDS APPROVED AND ARCHITECT SELECTED

The Livermore Elementary School District has announced the selection of Jack Buchter of Orinda (California) as the architect for new grammar schools which are to be built in Livermore from funds derived from a recently approved $326,000 bond issue.

HOSPITAL DISTRICT

Voters of the Marin County Hospital District approved a bond election of $2,076,000 for the construction of a 100-bed hospital in Greenbrae, Marin county. Robert Stanton of Carmel is the architect.

RIVERSIDE HOTEL

De Longchamps & O'Brien, architects, Reno, Nevada, have been selected together with Frank E. Green of Los Angeles, to draft plans for a $600,000 addition to the famed Riverside Hotel in Reno.

SCHOOL BONDS VOTED

Voters of the Meridian Elementary School District recently approved a bond issue of $60,000 for the construction of 2-class rooms and auditorium Grammar School in the Nord District, Butte county.

SCHOOL BIDS REJECTED

The Dairyland Elementary School District of Chowchilla, California, has rejected a bid of $45,000 for the construction of 2-class rooms and offices at the Grammar School.

STATE OFFICE BUILDING

The State of Nevada has allocated $850,000 for the construction of new office buildings in Carson City, capitol city of the state. Details of the buildings were not announced.

STATE FUNDS ALLOCATED

The University of California has announced the allocation of $1,000,000 for the construction of a low temperature laboratory building at the Davis campus. The building will be of 2-story construction and contain some 30,000 sq. ft.

BUS DEPOT

The Pacific Greyhound lines have announced plans for the construction of a new bus depot on 7th Street, between Mission and Market Streets in San Francisco, which will cost $2,000,000. Busses are currently being operated from the location.

SCHOOL BONDS VOTED

Voters of the Merced Union High School District recently approved a bond issue of $1,150,000 with funds to be used for the construction of new high school buildings.

Frank Wynkoop & Associates of Fresno are the architects.

RED DEVIL

Streamlining rather than sacrificing weight of floor pressure, capacity of motor, or size of brush, the new RED DEVIL FP11 floor polisher is made of cast iron, with the motor centered over the brush.

Revolving at 300 RPM the 10" brush, with 11" bristle spread, produces balanced floor pressure. White rubber bumper prevents soiled base boards. Available in several colors. Complete information from manufacturer RED DEVIL TOOLS, Irvington, New Jersey.

WAREHOUSE BUILDING CONTRACT: The California Almond Growers Exchange, Sacramento, have awarded a $41,000 contract to Affiliated Engineers and Contractors.

STOLTE INC.

General Contractors

—:—

OAKLAND · CALIFORNIA

STATIONERY
SCHOOL & OFFICE
SUPPLIES

•

Printing Engraving
Announcements

•

CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

CRITICAL CLIENTS PREFER—
CABOT'S COLLOPAKES

32 Lively Colors — No Adulterants Are Used

CABOT'S patented COLLO PAKING process results in a durable, Porcelain-Smooth Surface—Stays Clean—Resists the elements far years.

Write for color card, showing 32 colors.

GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO · SACRAMENTO
OAKLAND · LOS ANGELES · DENVER

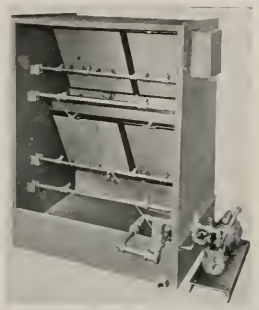
Inc., same city, for the construction of a warehouse addition.

BIDS REJECTED: The Tracy Union High School has rejected a bid of $542,754 for the construction of an addition to the High School. New bids are being taken by Kump & Falk, Architects, San Francisco.

ARCHITECTS SELECTED: Architects Birge M. Clark & Walter Stromquist of Palo Alto have been selected as architects for the new Monroe Avenue Grammar School, San Jose.

FARR SELF WASHING FILLER

A new, completely automatic, self-washing air filter has been announced by the FARR CO. of Los Angeles. Units are designed for installation in banks of standard



20x20x4" FAIR-AIR's inclined 30 degrees toward the air flow. Available in any size to meet C.F.M. requirements.

For complete technical information contact the manufacturer.

NEW APARTMENT BUILDINGS

Architect Herbert E. Goodpaster of Sacramento has announced that work is to start immediately on the construction of 10 new apartment buildings in the Town and Country Shopping Center near the city of Sacramento.

The project will include 120 apartments and will cost $1,000,000, according to Jere Strizek, Inc., owners.

SITE SELECTED

The State of California, Division of Architecture, Sacramento, has announced the selection of a site on the American River near Sacramento for the construction of Sacramento State College buildings.

SITE PURCHASED

The State of California has purchased a site in Sacramento for the construction of a new Motor Vehicles Building which is estimated will cost some $4,000,000. The building will be of reinforced concrete construction.

STOCKHOUSE. Cahill Construction Company, San Francisco, has been awarded a $400,000 contract for the construction of a 4-story reinforced concrete Stockhouse Building for The San Francisco Brewing Company. Ray N. Moore, San Francisco, is the Structural Engineer.

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

Scott Company

HEATING · PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

Fine
ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO (1)

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Lumber — Gypsum Wallboard

Interior Trim — Gutters

Special Moldings

The place to SAVE

is

LUMBER MANUFACTURING CO.

225 Industrial Ave. JUniper 7-1760

SAN FRANCISCO

Subscribe Now —

ARCHITECT and ENGINEER

$3.00 Per Year

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5

EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET

SAN FRANCISCO

Index to Advertisers

ANGIER Pacific Corp. ... *
ARCHITECTS Reports ... 33

BAXTER & Company, J. H. ... 36
BURKE, W. J. & Co. ... *

CLARK, N. & Son ... 40
CLASSIFIED Advertising ... 43
CENTER Stationery ... 46
CLINTON Construction Company ... 38
CONTINENTAL Water Heater Co. ... 31

DETROIT Steel Products Co. ... 5
DINWIDDIE Construction Co. ... 47
DUFFY Tile Co. ... 48

FIREBRICK Construction Co., J. N. J. ... *
FULLER, W. P. Co. ... 6 & 7
FORDERER Cornice Works ... 33

GLADDING, McBean & Co. ... *
GUNN, Carle & Company ... 46

HANKS, Inc., Abbott A. ... 48
HAWS Drinking Faucet Company ... 32
HERRICK Iron Works ... 47
HOGAN Lumber Company ... 38
HUNT, Robert W., Company ... 48
HUNTER, Thos B. ... 47

JOHNSON, S. T. Co. ... *
JUDSON, Pacific-Murphy Corp. ... 33

KRAFTILE Company ... 30

LUMBER Manufacturing Co. ... 48

MARBLE Institute of America ... 2
MATTOCK, A. F. Co. ... 48
MICHEL & Pfeffer Iron Works ... Inside Back Cover
MILLER Company, The ... *
MULLEN Mfg. Co. ... 47

NORTHERN California Electric Bureau ... 35

PACIFIC Clay Products Co. ... 40
PACIFIC Coast Gas Association ... Inside Front Cover
PACIFIC Manufacturing Company ... 39
PACIFIC Portland Cement Company ... Back Cover
PACIFIC Telephone & Telegraph Co. ... 45
PITTSBURGH Testing Laboratory ... 48
POOR Richard Engraving Co. ... 47

REMILLARD-Dandini Co. ... 48
REPUBLIC Steel Corporation ... 39

SCOTT Co. ... 47
SECURITY Valve Company ... *
SIDEWALL Lumber Co. ... 38
SIMONDS Machinery Company ... 39
SISALKRAFT Company ... 38
SMOOT-Holman Co. ... 37
SOULE Steel Company ... *
STANLEY Works, The ... 29
STOLTE, Inc. ... 46
SWINERTON & Walberg Co. ... 47

TAYLOR Co., Halsey W. ... *
TORMEY Company, The ... 47

U. S. Bonds ... 1

VERMONT Marble Company ... 39

WESIX Company ... *
WESTERN Asbestos Co. ... 45
WOOD, E. K. Lumber Company ... 36

*Indicates Alternate Months

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET

SAN FRANCISCO, CALIF.

TILE CONTRACTORS

Shower Doors, Tub Enclosures

Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

253 Minna St., S. F. YUkon 6-1489

DUFFY TILE CO

ABBOT A. HANKS, INC.

Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company

ENGINEERS

Inspection • Tests • Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY

Los Angeles • All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago • New York • Pittsburgh

ARCHITECT AND ENGINEER

VITAMIN LABORATORY - Wallisellen, Switzerland

AUGUST 1948

Wurdeman & Becket, Architects; P. J. Walker Co., Builders

The new home of General Petroleum Corporation is faced with Ceramic Veneer

One of the largest office buildings in Southern California, the new Home Office of the General Petroleum Corporation, is faced with beauty and permanence... with Ceramic Veneer. This machine-perfected terra cotta accents the modern lines of the structure and will keep it looking as modern as tomorrow.

Colorful Ceramic Veneer provides the exterior finish on the majority of the larger buildings in all the Pacific Coast cities. It faces many smaller buildings, too, such as stores and restaurants. Whether working on new construction or modernizing, you are invited to see how Ceramic Veneer can serve you and your clients.

75 YEAR GLADDING, McBEAN & CO. SINCE 1875

CERAMIC VENEER IS A GLADDING, McBEAN & CO. PRODUCT

Other quality ceramic products include Hermosa Tru-Joint Tile, Face Brick, Roof Tile, Floor and Patio Tile, Refractories, Glazed Block, Flue Lining, Vitrified Clay Pipe, Franciscan Earthenware and Franciscan China. *Offices at* Los Angeles • San Francisco • Portland • Seattle • Spokane

• ARCHITECT AND ENGINEER

Vol. 178 No. 2

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS, A.I.A.
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

LABORATORY

This vitamin laboratory of the Giestlich Chemical Works in Wolhusen, Switzerland, is a typical example of industrial architecture used in the construction of non-heavy machinery and manufacturing plants. See story by William A. Newman, Architect, Portland, Oregon, on page 18.

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

AUGUST

EDITORIAL NOTES 4

NEWS & COMMENT ON ART 6

THE ARCHITECT IN CIVIC AFFAIRS 8
By DR. HENRY T. HELD, President Illinois Institute of Technology

HOW TO WORK WITH YOUR BUILDING CONTRACTOR . . . 10
By H. E. FOREMAN, Managing Director, Associated General Contractors of America, Inc.

AIR AGE ARCHITECTURE, The New Seattle-Tacoma International Airport . 12

MODERN DEPARTMENT STORE AT MODESTO, California 14
LLOYD GARTNER, A.I.A., Architect

SWITZERLAND BUILDS 18
By WILLIAM A. NEWMAN, Architect

BOLD AND IMAGINATIVE METHOD OF CONSTRUCTION . . . 27

MORRIS PLAN BUILDING, San Francisco. Remodel 29
BLISS & HURT, TRUDELL & BERGER, Architects

A.I.A. ACTIVITIES 30

WITH THE ENGINEERS 32

PRODUCER'S COUNCIL PAGE 34
Edited by J. WILSON PEELE

HEADLINE NEWS & VIEWS 36
By E. H. W.

IN THE NEWS 37, 46

BOOK REVIEWS, Pamphlets & Catalogues 39

ESTIMATOR'S GUIDE, Building and Construction Materials 41

BUILDING TRADES WAGE SCALES, Northern, Central & Southern California . 43

CLASSIFIED ADVERTISING 43

CONSTRUCTION CONTRACTS AWARDED, General Data 44

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, E. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year: $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office, Vernon S. Yollop, Manager. Telephone DOuglas 2-8311.

EDITORIAL NOTES

ARCHITECTURAL PERSONNEL

California's five-year postwar building program for state hospitals and institutions is more than two years behind schedule owing to a shortage of skilled personnel in the division of Architecture despite the fact that California Personnel Board has eased somewhat its regulations governing examinations for civil service positions.

While plans and construction is the greatest in any similar period, they still fall far short of meeting urgent needs.

* * *

CONSTRUCTION INDUSTRY ADVISORY COUNCIL

With James R. Edmunds, Jr., former president of the American Institute of Architects, serving as chairman, representatives of more than a hundred trade and professional associations in the construction field, meeting as the Construction Industry Advisory Council recently approved a broad statement of recommended industry policy as a guide for future action.

The policy statement prepared by a drafting committee headed by William Muirhead, former president of the Associated General Contractors of America, and including representatives of the Building and Construction Trades Department of the American Federation of Labor, emphasized that:

1) There is evidence the more urgent demands for construction have been met and are stabilizing. There still exists a large backlog of private and public work which should keep the construction industry active and its workers employed for many years.

2) The setting up of the Building Research Advisory Board in the National Research Council is potentially one of the most important single steps ever taken to co-ordinate and advance the technology of building construction.

3) Planning for national defense which is being carried on by the National Security Resources Board and by the armed services should have the fullest cooperation on the part of all branches and all divisions of the construction industry.

4) Encourage young men to equip themselves for professional and managerial work in building construction, highway construction, and heavy engineering construction.

5) Resumption of normal practice of firm negotiations; firm quotations, firm delivery commitments, and firm orders.

6) The continued improvement of the nation's productive capacity and standard of living is dependent upon American industry making large annual investments for plant and equipment; and

7) That public construction be initiated only after careful consideration has been given to the need for such public facilities and not as a means of economic or social regulation.

The entire American economy will benefit from these Construction Industry suggestions and pattern of conduct.

* * *

"WHERE we will wind up, no one can tell. But if some of the new programs seriously proposed should be adopted there is danger that the individual, whether farmer, worker, manufacturer, lawyer, or doctor, soon will be an economic slave pulling an oar in the galley of the state."—James F. Byrnes, Former Secretary of State.

* * *

BETTER FACE IT NOW

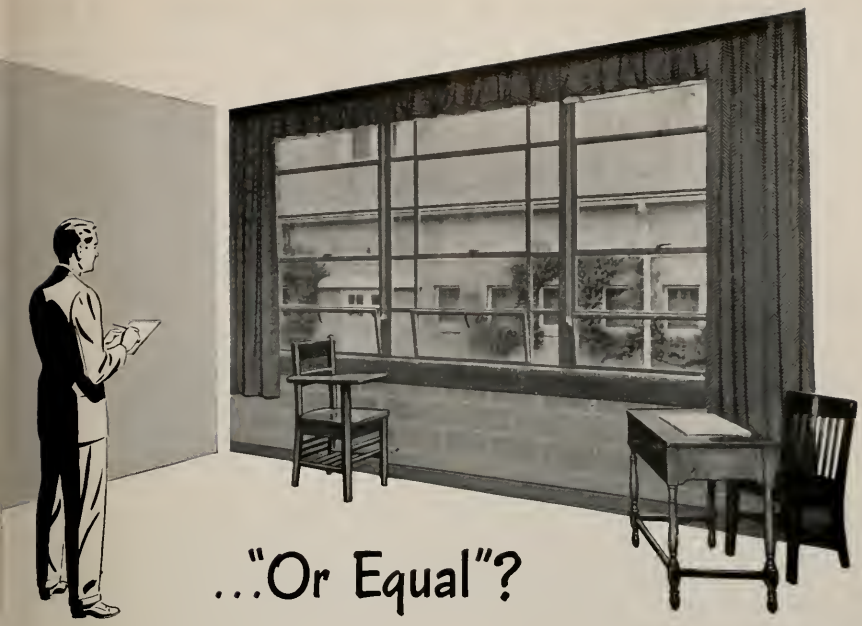
Our Socialistic baby in Washington has learned to walk and the first big step towards an eventual total national welfare state has been taken by Congress with the passage of the federally subsidized public housing bill, despite the fact that this sccialized government housing program was approved by a mere majority of five votes.

The pro and con arguments of this legislation developed into one of the bitterest political fights ever staged in the halls of Congress, the White House, and the nation as a whole, and in its final stages resolved itself down to personalities, charges and counter charges almost unprecedented in the annals of American history.

Aside from the complex ramifications of pre-election political campaign promises, federal bureau and departmental pressures, and obvious political kniving, the fact remains that for the first time in our country's existence, the government is now in the Housing business—building houses, renting houses—in competition with the private home builder and real estate agent.

Just imagine the incompatibility of the already over-burdened taxpayer, now having to pay federal taxes in order that a federal housing bureau may use those tax funds to engage in business competition with the taxpayer.

Industry, Business, and Professional men may just as well face the bald facts now that when governmental leaders shall choose to establish a Bureau in competition with any free enterprise such enterprise will find itself in an identical position with the home building industry of today.



..."Or Equal"?

"Such and such a brand . . . or equal". The term is necessary, sure. But there are so many things about a product . . .

Take Fenestra* Intermediate Steel Windows. Look closely and you'll see that there is not even a hairline crack at frame and vent corner joints. Those corners are mitered, welded and smooth finished, giving the entire window a strength and rigidity hard to "equal". Lift the window and shake it. You'll see.

Notice, too, that weathering baffles are built in . . . not just "applied". Independent laboratory tests prove Fenestra Intermediate Steel Windows tough to "equal" for minimizing air infiltration.

Specially designed hardware brackets are *welded*, not screwed, to ventilators. They stay on, tight, for years.

Those are little things. But they add up to better performance, longer. And, naturally, client satisfaction.

Fenestra Windows' larger glass areas invite in extra daylight. Air-deflecting vents bring in draftless ventilation. Designed to modular standards, these beautiful windows can be installed economically as single units or as whole window walls of combined units. Maintenance costs are low. Cleaning and screening are done from *inside*.

Fenestra Projected and Casement and Combination Windows are going into schools and hospitals all over the country. Commercial buildings. And homes. Sometimes for one or two of their advantages, but mostly for the combination of *all* their advantages. That combination has no "equal".

For full information on types and sizes mail the coupon. For immediate personal service, call your local Fenestra representative.

*®

Detroit Steel Products Company,
Dept. AE-8,
2262 Emeryville,
Oakland 8, California

Please send me data on types and sizes of the new Intermediate family of Fenestra Windows.

Name_____

Company_____

Address_____

NEWS AND COMMENT ON ART

CALIFORNIA STATE FAIR ART CONTEST JUDGES ANNOUNCED

The Board of Directors of the California State Agricultural Society have announced the following judges for the "History and Romance of California" art contest which is to be held in conjunction with the California State Fair in Sacramento, September 1 to 11.

Mrs. Catherine Campbell, acting chairman of the Art Department at Santa Barbara College of the University of California; John Garth, San Francisco artist; and Dr. Frederick Vickery, Director of the Crocker Art Gallery, Sacramento.

The judging of entries will take place on July 23 and 24 at the State Fair grounds in Sacramento. Entries will be judged in oils, water colors, and black and white media. Three contest divisions have been established: college freshmen and sophomores, college juniors and seniors, and students in private art schools.

CITY OF PARIS

The City of Paris, San Francisco, during the month of August will show outstanding exhibits.

The first, comprising Watercolors and Intaglio Prints mixed process by David Moore; Colorful Collage by William Harris of New York; Watercolor Pictures of the Month by Grace Freeman; and Sculpture of the Month, by Francis Baxter, will be shown the first part of the month.

The second exhibition will consist of Paintings by United and American Artists from which their original Christmas Cards have been reproduced. Original watercolors, Serigraphs, and Cards by Reeks, Holmes, Cunningham, Von Riddlestein, Carlis, Frederickson, and Sheets. Also Serigraphs by six well known Eastern Artists. This exhibition will be shown in the Rotunda Gallery the latter part of the month and until September 10th.

CALIFORNIA LEGION OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., director of the California Palace of the Legion of Honor, Lincoln Park in San Francisco, has announced the following schedule of exhibitions and special events for the month of August:

EXHIBITIONS: Jewelry by Milton Cavagnaro; Drawings by Alexander Archipenko; Sculpture by Robert Furrer; French Silver and other examples of European Decorative Arts, from the Catherine D. Wentworth Collection: Works by Max Weber; Photographs and Plans by Marcel Breuer, Architect; and Three Postwar Houses—a photographic exhibition.

EDUCATIONAL ACTIVITIES: Recreational painting classes for children from ages 8 to 12, each Tuesday and Thursday, 10:30 a.m. to noon. Instructor Lilly Weil Jaffe. Gallery Tours; ORGAN PROGRAM by Uda Waldrop, Saturday and Sunday at 3 p.m.; and FREE MOTION pictures Saturdays at 2:30 p.m.

PORTLAND ART MUSEUM

Thomas C. Colt, Jr., administration director of the Portland Art Museum, West Park and Madison, Portland, Oregon, has announced the following schedule of exhibitions and events for the Museum during the month of August:

EXHIBITION: The Artist of Oregon—1949. Recently purchased by the Museum are "Coast Rhythms", oil painting by Carl Hall; "Reverie", sculpture by Mark Sponenburgh; Brass Sculpture by Fred Farr; and "Landscape", lithograph print by Robert Galaher.

Recent watercolors and oils by Lyonel Feininger will be on exhibition during the month, including such themes as church steeples, Manhattan skyscrapers, and stars and moonlight. Many of the works of Paul Klee will be exhibited at the same time.

A special loan exhibition from the Collection of M. Knoelder and Company of New York offers masterpieces of Italian religious paintings from the 14th to the 18th Centuries.

A progress report of American Textiles will also be shown.

SYRACUSE MUSEUM OF FINE ARTS —14th CERAMIC NATIONAL

The 14th Ceramic National will open at the Syracuse Museum of Fine Arts, Syracuse, New York, with a review on October 29th, according to an announcement by Oscar F. Soule, president of the museum.

The exhibition will remain at the museum until early in December when it will be sent on a year long tour.

Among those offering prizes in the competition are Richard B. Gump, of San Francisco.

Regional judging for the Ceramic National will take place in September with both the Los Angeles County Art Institute, and the San Francisco Museum of Art taking part.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building at the Civic Center, will present the following exhibits and activities during the month of August:

EXHIBITIONS: The Twenty-Eighth Annual Exhibition of Advertising and Editorial Art, sponsored by the Art Directors Club of New York in cooperation with the Art Directors Club of San Francisco; New Works by Bay Region Artists; Paintings by Harry O. Baker, Karl Baumann and Victor de Wilde; Polish Manual Arts; Paintings by Bezalel Schatz; Photographs by Julia Margaret Cameron; American Type Designers and their Work; Paintings by Philip Curtis; Design in the Patio; Paintings by Lee Mullican; Photographs by Ansel Adams; American Textiles; and Paintings by Florence Saltzman, John McNee, Jr., Douglas McClellan, Frederick Heidel and Warrington Colescott.

ACTIVITIES will include an ORCHESTRAL CONCERT by members of the San Francisco Symphony Orchestra, conducted by Emanuel Leplin, on Friday, August 28th at 8:15 p.m.; Famous Film Series each Tuesday evening at 8 o'clock; two special Gallery Tours, August 14 and 28; and regular Gallery Tours each Tuesday and Sunday afternoon in charge of Mrs. Carol Bigelow, Mrs. Henry H. Brigham, Jr., and Mrs. George DePeyster.

FIRST ANNUAL PACIFIC COAST DECORATIVE ARTS COMPETITION

The San Francisco Museum of Art, War Memorial building at the Civic Center, has announced that they will sponsor the First Annual Pacific Coast Decorative Arts Competition which will be held early in November, and will cover the fields of wallpaper, textiles, and table and lamp designs.

Object of the event is to take advantage of, and stimulating interest in, the creative talent on the Pacific Coast.

All of the material submitted must be in the tradition of good contemporary design suited for contemporary living, and the general conditions of the competition include the following points:

Purchase prize designs become the property of the sponsor. Honorable mentions may be purchased by sponsor by special arrangement between sponsor and designer. Purchase prize designs and honorable mentions will be on exhibition at the Museum from November 4 to December 11.

All competitors must be residents of Washington, Oregon, or California.

Entries must be the original creation of the competitor and his exclusive property. A design is ineligible if it has been previously produced for sale. A competitor may submit any number of separate entries.

All entries must be received on or before September 15th at the San Francisco Museum of Art. Entry forms and detailed requirements may be obtained by writing to the Museum, Civic Center, San Francisco.

The Architect In Civic Affairs

By DR. HENRY T. HELD*

President, Illinois Institute of Technology

I am pleased to be elected an honorary associate of the Chicago Chapter of the American Institute of Architects. Members of your group have made, and are continuing to make, a distinguished record in the practice of your profession. Chicago is fortunate to have such an excellent group of architects whose work is reflected not only in the physical characteristics of our city but in important architectural developments that have set nationwide patterns.

Unfortunately I can claim no knowledge of architecture or skill in its practice. I can, however, claim an interest in architectural education, and because a substantial proportion of the architects who have built Chicago have received that education at Illinois Tech and its predecessor, Armour, I have followed the work of architects with more than ordinary concern.

In thinking about what I might say here this evening it occurred to me that I might discuss professional education. But after further reflection this seemed a better opportunity to relate the work of professional people in general and perhaps architects in particular to some of the broader responsibilities for citzenship in a community.

To begin with, there is no particular reason to believe that responsibilities of citizenship in a democratic society are in any sense limited to those of us who earn our livelihood by the practice of a profession, whether it be architecture, engineering, law, medicine, or accounting. Our goal is to insure that all of our citizens are free to seek the truth, to have an opportunity to be informed, and to reach sound and intelligent conclusions on matters affecting the common good. We seek to attain this goal by providing the best possible education within the limits of each individual's capacity to take advantage of it, and we seek to insure that freedom of opportunity exists for all. The fact that we frequently fall short of these goals in no way challenges their validity.

On the other hand, as professional people, we are granted certain privileges, earned it is true by education and experience, and sometimes protected by law. Every profession has inherent in it a body of specialized knowledge, not usually shared by the general public, and a responsibility to use that knowledge for the public good. The professional man's responsibilities to his individual clients are well understood and in general competently discharged. Not so clearly grasped is the importance of the general relationship of the professional man to the community in which he lives and the obligation which I think he has for bringing his powers of logical reasoning and trained intelligence to bear on the political, social, and economic problems inherent in every phase of life in a democratic society.

To attain a high degree of competence in the practice of architecture or engineering is in itself a challenging task. Yet the technical problems are much more readily solved than are some of the complex problems of government, social organization, and politics. Many professional people tend to shy away from such activities, feeling that they have neither the time nor the competence to engage in them. As a result decisions are often made and policies often determined by people of lesser general competence who are unrestrained by any recognition of their limitations.

For those of us who want to make some contributions to the public welfare, a good place to begin is in our own city. Any city abounds with problems that cry for solution. The responsibilities of local government in a large city such as ours

**EDITOR'S NOTE—This is the text of an address delivered by Dr. Henry T. Held, president of the Illinois Institute of Technology at the annual meeting of the Chicago Chapter of The American Institute of Architects, recently held in Chicago.*

are extremely complicated and difficult. Yet proper answers will only be found through the active participation in governmental and civic affairs of a large portion of the responsible citizens of the community.

The revitalized political leadership which came to Chicago in the election of Mayor Kennelly two years ago has given many of us new hope. And yet no mayor or group of city officials can be completely successful without the help and active participation of those citizens who are willing to put the public welfare foremost. Many of Chicago's most serious problems are closely related to the general field of architecture and construction. Sound and progressive long-term city planning is essential to the future of the city. It is encouraging to see prominent architects taking a leading role in the work of the Chicago Plan Commission. Others of your members devote their efforts to the administration of city departments and to planning for public works. I should like to see more architects engaged, with or without salary, in policy-making positions in city government.

Chicago's most critical problem is that of housing and slum clearance. The city's 15,000 acres of blight and near blight present a terrific challenge to those of us who are interested in the future of Chicago as a place in which to live and work. Since the end of the war, housing construction has proceeded at a substantial pace outside the city limits; but Chicago itself lags far behind most major cities in America. The welfare of the city and its people and, in fact, the financial solvency of the city government itself requires the encouragement of more new buildings in Chicago. Most of the recent building has been done in outlying areas where land was readily available and neighborhood conditions promised reasonable stability in values.

The slums and blighted areas cost the city millions of dollars annually in lost taxes, require excessive expenditures for police, health, and fire protection and take an even greater toll in human misery caused by bad housing and intolerable living conditions. In Chicago these areas have scarcely been touched.

Chicago has a sound plan for slum clearance and redevelopment. The elements of that plan are beginning to be put in operation, but we are still a long way from any substantial number of new homes. In 1947 the state legislature enacted a slum clearance and redevelopment act and appropriated funds to be matched by municipalities. A bond issue approved by the voters of the city later the same year implemented the program. You will recall that the Land Clearance Commission was created with power to acquire slum land with public funds, write down the cost of the land to its real use value, and sell the land to private developers for such use as required by proper redevelopment.

Thus we have provided the machinery to acquire and clear slum land and make it available for re-use at reasonable cost. It was also recognized that the clearance of slum areas would displace substantial numbers of people who because of the current housing shortage, would have great difficulty finding a place to go. Consequently appropriations were also made available for relocation housing to be built for low income families by the Chicago Housing Authority.

A third element in the program was a provision for non-profit housing to be built by what is called the Chicago Dwellings Association. Satisfactory implementation of this latter program still requires action by the State Legislature and it is hoped that this will be forthcoming in the present session.

The Chicago citizen—impatient for results—may well ask what has happened to this carefully developed plan. To date the only physical evidence is construction on the Dearborn Homes project of the Chicago Housing Authority. This project will provide relocation units for 800 low income families. Those of you who have followed the problems and delays that beset the whole program know something about its difficulties. Almost a year ago the Land Clearance Commission selected its first redevelopment site on the South Side. A tentative offer from the New York Life Insurance Co. and interest on the part of local insurance companies seemed to insure its redevelopment, and the Commission prepared the facts on which to secure City Council approval. In the meantime the Chicago Housing Authority sought approval of the City Council on the location of relocation housing sites. After much delay and controversy, several sites were finally approved.

Further delay was occasioned by long discussions of the proposed Carey ordinance which finally failed to pass. One month ago the Land Clearance Commission redevelopment site No. 1 was finally approved by the City Council and the Illinois State Housing Board, in spite of substantial opposition from people living in the area who feared displacement. The Commission has now begun the acquisition of property in the area. In due time, but certainly not too quickly, the New York Life Insurance Co. should be under way with actual construction of 1400 or more rental apartment units together with a suitable commercial development.

The Housing Authority expects to begin construction soon on some of its relocation projects

(See Page 40)

How To Work With Your Building Contractor For Greatest Economy

By H. E. FOREMAN*

Gen Mgr., Associated General Contractors of America, Inc.

An honor has been bestowed upon me to represent the contracting profession in discussing some of the problems involved in carrying out the great building program which has been projected by the Church.

Your program chairman told me that "Never before have administrators needed a clear-cut picture of the services of the contractor as they need it today."

I would like to point out that the sound business basis on which the Church is approaching its building problems as a whole should prove a monument to institutional building. This type of construction, badly needed as it was, and still is, has been deferred by years of depression and war, but now is well on its way to revival in record proportions.

The practical conferences you are sponsoring will prove of inestimable value, not only to the administrators of building programs, but also to the construction industry by enabling it to carry out the work with the greater efficiency and economy that is characteristic of projects constructed for owner-clients with an above-the-average knowledge of the ethics and practices peculiar to the industry.

Functions of a General Contractor

It is often difficult for the purchaser of construction — whom I shall refer to as the owner — to master the complex and interwoven relationships involved in a project without extended study. These relationships include owners, architects, engineers, general contractors, subcontractors, manufacturers, equipment distributors and labor.

The distinctive function of the general contractor is, succinctly, to assume full centralized responsibility for the delivery of a properly completed structure in accordance with the owner's specifications.

The responsible contractor, through his experienced organization is pre-eminent in ordering, securing, assembling and placing the innumerable materials and devices required on the modern construction project. His function of managing and coordinating equipment and services has become essential, due to the increase in complexity of projects and the growing need for speed and efficiency in completing them. The structures that are required today, with their modern mechanical equipment, are a long cry from America's first buildings.

Finally, the responsible general contractor provides essential and economical services for owners because he has introduced or mastered each new method of field construction and has expanded his functions so as to operate effectively in directing and coordinating highly specialized business and technical processes.

Planning a Project

The primary step by which most economical and efficient work can be obtained by cooperative efforts of the owner, his architect or engineer and his general contractor, is a firm predetermination of the features which are desired to be incorporated into the structure. Alterations of the original specifications from time to time during the course of construction will prove costly.

Since it is costly to prepare a bid, it is important to limit any alternate specifications to only those that are absolutely necessary in the opinion of the architect and the owner for the purpose of insuring a bid within a limited appropriation, or providing an opportunity to make a major determination in

*EDITOR'S NOTE—*The article presented here was delivered by H. E. Foreman, managing director of The Associated General Contractors of America, Inc., at the Second National Catholic Building Convention and Exposition in Chicago recently.*

the selection of a material or purpose. It is suggested that contractors invited to bid, be furnished free of charge at least one set of drawings and specifications.

The choice of an architect should be made with the knowledge that the administrator should have full confidence in his judgment. It is through the architect that the owner deals with the general contractor, and the responsible architect who is experienced in the type of work proposed will be able to produce the most economical design.

One Over-All Contract

Before discussing bidding procedure, I would like to point out the advantages of one over-all contract for the construction of a project, in which responsibility is centralized in the general contractor.

From time to time, there have been attempts to cut costs by awarding separate contracts for various parts of a structure on the erroneous supposition that the owner will save money through improved competition and the elimination of the general contractor's profit on subcontracts.

The award of separate contracts makes for costly delays in construction operations by depriving the general contractor of one of his principal functions — the proper coordination of all phases of the work. Such a system can easily burden the owner and the architect with labor problems and conflicting schedules of work, in addition to the added work of receiving bids on, and awarding separate contracts.

One of the duties of the general contractor who has an over-all contract is the obtaining of an adequate number of bids to insure fair competition among subcontractors.

It is only fair to also point out that when separate contracts are let, the prudent general contractor will include in his contract price an additional sum for those contingencies that he anticipates in carrying out the project, and that the architect also usually increases his professional fee for handling the additional work required.

Recently, when the separate contracts question arose in connection with the federal hospital construction program, the Joint Cooperative Committee of The American Institute of Architects and The Associated General Contractors of America stated its belief that "the practice of awarding separate contracts is not conducive to the best results."

Selection of the Contractor

Selection of the general contractor should, of course, be made with as great care as that of the architect or engineer.

There are two avenues of practice in the selection of a contractor for private construction: (1) competition among a group of qualified general contractors equally acceptable to the owner, with the contract award going to the lowest bidder; or (2) the selection of a general contractor to perform the work on a cost-plus-fee or percentage basis.

In either case, the choice of those general contractors who are recognized for their skill, responsibility and integrity cannot be too strongly stressed.

Doubtless, owners will be familiar with the qualifications of contractors in their own localities. If any information is required, however, on the records of other construction firms, it is suggested that this data may be obtained from the Bureau of Contract Information in Washington, D. C., This independent, non-profit organization files confidential information available to those with the authority for awarding contracts, granting credit or writing surety bonds. It was created two decades ago through the efforts of the A.G.C. and surety companies.

In the case of contracts let by competitive bidding, the specifications or a notice to bidders and a fixed bidding date should be announced, and notice given that the bids will be opened publicly and read to the interested bidders at that time. It also should be made clear that the contract will be awarded to the lowest bidder, if bids come within the money available.

When the contract is awarded on a cost-plus-fee basis, the contractor should be selected at the same time as the architect and engineer. This will afford the advantage of the combined technical experience of the architect and engineer and the practical experience of the contractor in the preparation of plans and specifications. In this system, with the contract awarded on a cost-plus-fee basis and the contractor giving an outside guaranteed cost, the benefits of competition on all materials and subcontracts will accrue to the owner, who has a right to approve or disapprove.

Guide to Bidding Procedure

The owner and the architect can plan an important part in working with their general contractor for economy in the matter of bidding procedure.

For full information on this subject, I refer administrators who contemplate building to the booklet, "A Suggested Guide to Bidding Procedure," copies of which are available here today. This guide was developed jointly by the American Institute of Architects and The Associated General Contractors of America.

While most architects are probably familiar with this document, especially if they are members of A.I.A., wide distribution is being given the booklet among prospective owners, to the end that they will have a better understanding of the value of

(See Page 17)

CENTER of Administration Building as seen from aircraft runways

AIR AGE ARCHITECTURE

The New SEATTLE - TACOMA INTERNATIONAL AIRPORT

EDWIN GRAEF, Architectural Designer

CHARLES DEARSTYENE and
CHESTER CLAUSEN, Structural Engineers
BEVERLY TRAVERS, Electrical Engineer

GEORGE T. TREADWELL, Chief Engineer, Port of Seattle

CLARENCE MAY, Mechanical Engineer

HOWARD LEASE and
HENRY LEIGLAND, General Contractors

LOCATION: 12 Miles South of Seattle
19 Miles North of Tacoma, on U. S. Highway 99

SITE: 920 Acres. Purchased by the Port of Seattle, in cooperation with the Port of Tacoma, the City of Tacoma, and Pierce County.

RUNWAYS:

North-South	150 ft. by 6100 ft.	(Projected extension 7500 ft.)
East-West	150 ft. by 5000 ft.	
NE-SW	150 ft. by 5600 ft.	
NW-SE	150 ft. by 5000 ft.	

APRON: Eight plane spotting positions, each 150 feet in diameter, and served by eight loading gates. Space available for eight additional positions.

LIGHTING: Flush type on all four runways, high intensity on instrument runway. Approach line lighting planned.

RADIO: Multiple channel voice communication, instrument landing system, Surveillance Radar and Precision Radar system (Planned).

ADMINISTRATION BUILDING: Functional, modified for decorative treatment; Total area 243,000 sq. ft.; Total cubage 2,790,000 cu. ft.; Cost $4,000,000.

CONSTRUCTION: Reinforced Concrete; Glass Blocks; Precast Concrete Slabs; Terrazzo Floors; Decorative ceramic veneer walls; Acoustical plaster and tile; Combination steam, hot water and forced air heating; Nine elevators.

Port of Seattle, Photographs

Modern Department Store in California's famed San Joaquin Valley

MODERN DEPARTMENT STORE AT MODESTO California

LLOYD GARTNER, A.I.A., Architect

McDONALD, YOUNG & NELSON, General Contractors

L. H. & B. L. NISHKIAN, Consulting Engineers

The design and construction of the new J. C. Penney Company department store in Modesto, California, represents several unusual and unique points in commercial architectural design, as well as engineering and construction principles.

Even before the new building was laid out in preliminary form on the drafting board, architect Lloyd Gartner, A.I.A., of San Francisco, held a series of conferences with the store officials and inter-department managers, to determine the most important factors in a building which would meet a maximum in diversified merchandise selling requirements.

A complete model merchandising lay-out was then developed including style and type and placement of display cases and store fixtures, with each department receiving individual consideration from the standpoint of local community use, requirement, habit and sales development possibilities.

After the overall sales and merchandising plan had been completed and approved, architect Gartner, proceeded to design a store building which would properly take care of the already approved merchandising functions and at the same time provide possibility for future expansion.

The result was a strictly modern reinforced concrete building of the Class A type, completely equipped with newest building facilities including proper lighting to meet varying local climatic conditions such as long daylight hours in the summer, and overcast short daylight hours in the winter months. Due to the great varience of temperatures between the summer and winter months, the building is provided with complete air conditioning that assures cool, comfortable air throughout the store during the summer, and warm fresh air in the winter.

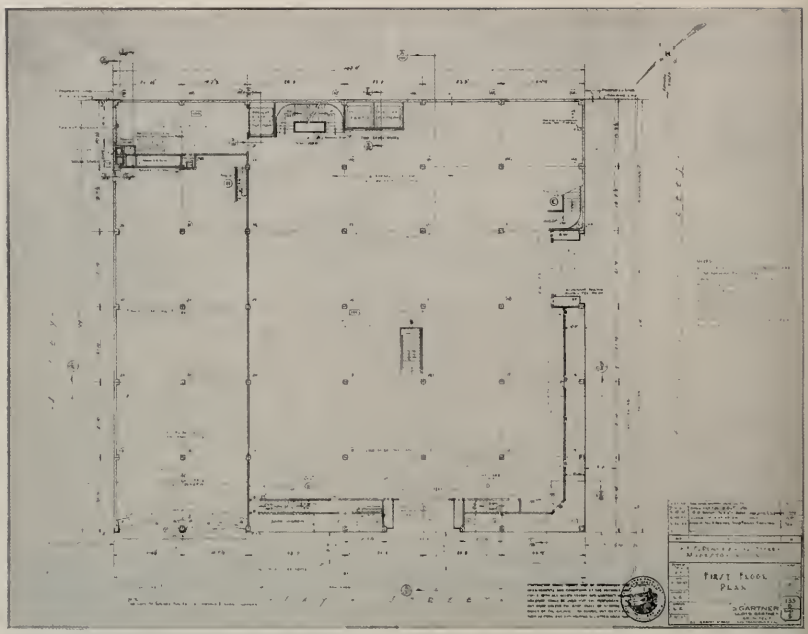
Even tho the building is of fireproof construction, and as an extra precaution against fire which might start in merchandise stocks, an extensive automatic fire sprinkling system has been installed.

The building itself comprises a structure 140 feet by 125 feet, containing a large basement, the ground floor level, a spacious mezzanine floor on which the general business and executive offices are located and where ample space has been provided for a special merchandise display and selling activity, while the entire second floor is devoted to merchandise displays and selling.

For the convenience of store customers who wish to use the mezzanine and second floor, two high speed, modern self leveling elevators have been installed, and to allow for the handling of merchandise by store employees without interfering with normal store-customers functions, a spacious freight elevator has also been provided.

Among the unique engineering design features of the building are the steel columns and reinforc-

MAIN FLOOR showing portions of the ladies division section



FLOOR PLAN

ing which is carried up from the base to the roof level. This will provide for the addition of another floor to the building at any future time when the store management finds it necessary to expand the building area and facilities.

The detail construction of the roof is also quite unusual in that it is on a dead level and has a two inch rigid covering that is highly insulated with a heat and sound resistant composition board material.

The outside appearance of the building has been made attractive by the use of architectural concrete facing on the two sides which front on the streets. There is a structural steel designed marque along the 140 foot and 125 foot street sides of the building that serves as a protection to pedestrians against warm summer sun, and winter rains. The large electric corner sign is designed and constructed as an integral part of the building structure itself.

To properly meet the building's needs for heating during the winter months, a large steam plant has been provided, and to dispose of waste paper, packing boxes and other waste material an incinerator is provided.

The building contains some 58,000 square feet and was constructed at an approximate cost of $460,000.

HOW TO WORK WITH YOUR BUILDING CONTRACTOR

(From Page 11)

proper contract procedures which will enable general contractors to submit their best possible bids.

As a background for this document, I quote from its foreword:

"The customary practice of buying construction service through competition is one of long standing. Until owners and architects are prepared to determine the proper cost of the project and select the contractor who is best qualified to execute it, very likely it will continue. Its merit is that such competition forces the contractor to be constantly on the alert in search of new methods and more efficient operation.

"To eliminate waste and establish a friendly spirit of cooperation between the contracting parties and the architect, and to obtain other objectives, the procedure described in this document is offered as a guide. It is believed that the best interest of the architectural profession will be furthered if its members will adhere to this procedure, and that if contractors and subcontractors will support this procedure they will further their own interests, the interests of the architect and the public.

"The owner has a right to expect, when bids are tendered, that the architect has used due diligence, reasonable skill and good business judgment so that he is assured that the accepted contractor will deliver to him everything needed to complete a building, adequate for the purpose intended, without friction, misunderstanding, or unexpected cost.

"The contractors have a right to expect that the information shown on the drawings and specifications is sufficient to enable them to prepare a complete and accurate estimate, and that they will not be penalized for a lack of care or skill in the preparation of these documents."

Bidding Guide Highlights

Briefly, the Guide to Bidding Procedure deals with the subjects of (1) Preliminary Investigation, (2) Drawings, (3) Specifications, (4) Bidding, (5) Separate Contracts, and (6) Sub-Contracts.

For example, with respect to preliminary investigations, the plans and specifications should include all possible information as to soil conditions in order to avoid forcing the bidder to include contingencies in his bid to take care of unexpected soil conditions.

Drawings should be clear, accurate, adequate, dimensioned and complete, eliminating any ambiguities and misinterpretations that might otherwise prevail.

Specifications should be clear and concise.

Bidding should be limited to contractors of established skill, integrity, and responsibility, and of proved competence for work of the character and size involved.

It is suggested that adequate price competition be obtained from not more than six bidders, and that an excessive number of bidders should not be invited without compensating each bidder for his services.

When alternates are used, they should be applied in the sequence in which they are listed to the bids.

I have noted earlier the disfavor with which separate contracts are regarded among general contractors. However, if separate contracts should be used, it is important that the specifications and drawings clearly determine the elements of work so handled, and the connection of the general contractor's work thereto.

Once the contract is awarded, the venture should be considered a partnership to carry out the work in strict accordance with the specifications. Measures should be taken to insure strict application of the proper relationships in this partnership. Any instructions of the owner or any changes desired by him during the course of the work should be conveyed to the contractor through the architect or engineer, who is the owner's representative. Direct approaches to the contractor's workmen have often resulted in serious confusions and delays.

What to Expect of the Contractor

I have dwelt in some details on points to build a sound foundation for insuring optimum results in obtaining a responsible general contractor, maintaining a proper relationship on the job, and expediting work under his direction.

With these points in mind, the owner has a right to expect from the general contractor:

1. Where lump sum bids are requested, a competitive bid that represents a careful study of the requirements of the job, to which should be added a reasonable charge for overhead and profit.

2. The furnishing of a performance and completion bond if requested, or if provided for in the specifications.

3. Initiation of the work when directed by the architect or owner, and diligent prosecution of the work in strict accordance with the plans and specifications.

4. The taking out of insurance as may be specified, and offer of proof of such insurance to the owner upon demand.

5. The following out of such instructions as may be given by the architect or the engineer from time to time insofar as they are consistent with the plans and specifications, and the contract provisions.

(See Page 26)

Photo
A. G. Wehrli

INTERLAKEN **A Typical Swiss City**

SWITZERLAND BUILDS

By WILLIAM A. NEWMAN, Architect

What are architects doing today in this picturesque little republic tucked away among Europe's Alpine peaks and valleys? Have they new and advanced ideals, plans for important improvements, and are they busy? I questioned genial architect Max Zurcher. It was a delightful spring morning as I glanced from his office windows high above the fair city of Lucerne, lying gracefully beside its lovely lake, with towering Mt. Pilatus standing guard. "Tell me something of your experiences and of Swiss architecture," I suggested.

In his well furnished office, he leaned back in an easy chair and recalled his early architectural training, beginning at fourteen in Switzerland, later in France, Germany and Italy, and finally a visit to America in 1920. That visit, he smiled, furnished him with architectural inspiration and interest, to which the local papers gave considerable publicity. His first practical experience was planning and supervising the construction of the family residence.

During recent war years many Swiss profited well by their industry, and are now investing their

funds in new buildings. As a result, architects are very busy, and the construction industry is in full swing. For some years it has been difficult to get materials and labor, but conditions now are better.

Presenting me with an interesting booklet of his architectural work, Mr. Zurcher continued: "Plans are being prepared for beautifying our cities, for new civic improvements, new commercial structures of all kinds, and for the modernization of existing buildings."

There is much that Switzerland offers of artistic merit and fine craftsmanship. Here you may find yourself surrounded with buildings of contrasting styles centuries old. You may step back more than a thousand years into historic times, finding examples still extant of Greek and Roman art, sculpture and architecture.

As you recall, it was during the sixteenth and seventeenth centuries that adventurous Swiss were invited by the rulers of Europe to enlist in their foreign wars. Many Swiss became leaders in battles and returned with fortunes and titles such as, French baron, Spanish grandee, etc. They had also become interested in the architecture of the countries in which they served.

MAX ZURCHER,
Architect

MULTIPLE geyser like fauntain on lake shore front at Lucerne which shines with iridescent beauty at night from indirect lighting.

An architectural style beloved in all of the Swiss tradition is the Rathanskeller at Lucerne.

BELOW: Typical of the many new hospitals being constructed in Switzerland is the Lory Hospital at Berne.

The Memorial Royal Chapel of Queen Astrid of Belgium at Kussnacht, Switzerland, is an interesting study in Swiss architectural design.

BELOW: Construction of a new building brings out the sidewalk "kibitzers" just the same as any large building project in any American city.

Statue of William Tell
and Son at Altdorf

Unique indeed is the open air passenger elevator at Burgenstock which carries people from the high mountain cliffs to the lake shoreline below.

The new St. Charles
Church at Lucerne

INTERIOR of the Restaurant Stadthof in Lucerne

So today you discover among older Swiss buildings reminders of the differing cultures of the great architects of Italy, France, Germany, Spain, etc. It was in those countries that princely patrons of the arts encouraged the development of distinctive styles, such as primitive Romanesque, upper Italian, Venetian, Neapolitan, Dutch, Gothic, early Renaissance, etc.

As you ride out into the colorful countryside among the villages you become aware that there is considerable respect for the old timbered farmhouses. Especially revered are those decorated

Intrim of St. Charles Church

TODAY'S Swiss Chalet—the House Welter in Hergiswil, Switzerland

LIVING-ROOM of the same house (Max Jurcher, Architect)

with carving and painting, of the patrician type, where for centuries the family lived, had their workshops and even warehouses; so naturally they are spacious.

Then there are the old town halls and guild houses with their granaries and arsenals; their beautiful interiors finished with fine carved paneling, ornate stucco ceilings, and elaborate wrought ironwork.

It is well that public opinion supports the preservation of the worthy historical buildings, and is opposed to the erection of a new flat-roofed cube in the heart of an old traditional street or city. The architect, therefore, is obliged to consider the surroundings of his project, and local interest in the historical.

During the last century, prior to the 1870's, French influence generally predominated, due to the proximity of Paris, the nearest great capital. Later, rich Swiss industrialists began to build

One of the dining rooms of the Restaurant Stadthof. Max Zurcher, Architect.

Detail design of Swiss residence bedroom. The closet doors at the left are papered. Max Zurcher, Architect.

estates and country houses in the English baronial. Then with the rise of Germany, its architecture was welcomed, as was also that of Sweden and Finland.

You may recall that the Swiss cantons or counties, were settled by French, German and Italian groups, whose descendants have ever since retained their original language and customs. Thus the architectural student from a French canton found his way to Paris and returned to design Swiss palaces in accord with the training received at the Ecole des Beaux Arts. The student from a German canton traveled to the university of Munich, and the Italian to the many fine schools of Italy.

In the more recent work of progressive Swiss architects, there is a freshness and vitality that is delightful.

Turning again to my Swiss architectural friend, I learned that he recommends his fellow architects should give preference to developing new types from the Swiss historical background, rather than from foreign sources.

It was a pleasure to meet this warm-hearted architect, and a regret at parting. However, just before saying "Good-by," I cautiously inquired: "How does the young architect here secure new clients?" Modestly, with a broad smile, he replied: "That's an open secret—good work, trustworthiness, and cooperation; and of course, as you Americans say 'a little pull' helps a lot."

HOW TO WORK WITH YOUR BUILDING CONTRACTOR

(From Page 17)

6. The making of changes in the project as may be decided upon from time to time by the owner and ordered by the architect or engineer in writing. All change orders obviously should be priced, and the contract modified accordingly.

7. The furnishing of materials of the grade specified in the specifications, and performance of the work expeditiously.

8. Delivery of a completed building within the time specified in the contract, free from any liens or claims.

Conclusion

I have given you, briefly, some of the thoughts and procedures developed by The Associated General Contractors of America with other trade associations and professional societies in the industry.

National conferences such as you are holding here today, with its additional symposiums on architecture and materials, should prove valuable in setting a pattern for the solution of building problems locally from time to time. I understand this great, projected program contemplates some 10 billions of dollars of construction and remodeling in the next 10 years of the many types of institutional building which come under your jurisdiction—churches, hospitals, convents, rectories, convalescent homes, recreation centers.

On behalf of my association, composed of more than 5,200 construction firms throughout the country, I extend any cooperation from our 107 chapters and branches that they may be capable of rendering in the solution of your local problems. I am sure, also, that the Joint Cooperative Committee of the A.I.A. and the A.G.C., which studies procedures designed to improve building construction conditions, will be happy to give any assistance within its area of activity.

I have made these suggestions as steps in the laying of a broad foundation for relationships with the general contractor to assist him in carrying out his work most economically to the benefit of the owner.

SAN FRANCISCO CONSTRUCTION APPRENTICES GRADUATE

Some five hundred young men and women received journeyman certificates in thirty-nine trades at the first postwar graduation of San Francisco apprentices recently.

Sponsored by the Labor Management Committee, composed of employer and labor groups, this year's graduation represented a program incorporating 63 different crafts and occupations and represents 5,000 enrollees.

More than half of the graduating apprentices are from the building and construction trades, including carpenters, masons, plasterers, tile layers, hardwood floor layers, electricians, lathers, and roofers.

GRAMMAR SCHOOL ADDITION: McCoy and Butler, Yuba City, have been awarded a $66,100 contract for the construction of a 3-class room, kindergarten, and toilet room addition to the Arbuckle Grammar School. Koblick & Fisher, Sacramento, architects.

NEW COURT HOUSE

The Mendocino County Board of Supervisors have approved awarding of a general contract to the Carl N. Swenson Company of San Jose for the construction of a new county court house and jail in Ukiah at a cost of $624,435.

C. A. Caulkins, Santa Rosa, is the architect.

Roof trusses with Strestcrete roof slabs in place to be grouted.

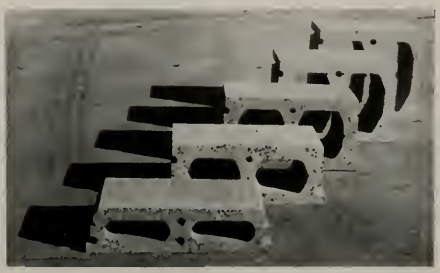
BOLD AND IMAGINATIVE METHOD OF CONSTRUCTION

Several hundred northern California architects, engineers, and construction representatives recently witnessed an educational and scientific series of tests and demonstrations in conjunction with a bold and imaginative new method of construction developed by the Basalt Rock Company at Napa, California.

Composed of machine made concrete units, the contacting edges of which have been precision ground and the units secured together with prestressed steel bars positioned in recesses or grooves designed into the units, the new product is called "Strestcrete", and as the name implies is reinforced concrete.

The demonstration included the erection of roof panels and Strestcrete tongue and groove siding which was attached to the steel frame work of a building 40 feet wide, 100 feet long, and 22 feet in height at the eave. The material was attached to the steel frame work by welding.

Steel trusses for the building were 40 feet long and placed 16 feet apart. No purlins were used



Strestcrete units are manufactured in depths of 4 in., 6 in., 8 in., 10 in., and 12 inches.

Panel of tongue and groove siding being lifted into place by crane. Section span is 16 ft. 3 in. and is 6 ft. 8 in. high.

and the 16 foot spans were open from truss to truss. Roof slabs 16 feet long and 4 feet wide composed of 6-inch thick units were laid in place by use of a crane. The rate at which the floor slabs were laid proved that a trained crew could place approximately 5,000 square feet of roof slabs in eight hours. End washers of steel were used at both ends of the assembled slabs and the steel is stressed against these washers. This makes it possible to weld the concrete panels to the steel frame with a positive type of connection and gives the building a tremendous factor or rigidity.

The demonstration proved how easily the use of Strestcrete roof and floor slabs could produce ceiling and floors simultaneously, ready for almost immediate finishing and decorating. The slabs would also provide an immediate working platform for other craftsmen to start placing plumbing and electrical fixtures in their proper places even while the concrete grout joists were being poured.

The erection of tongue and groove siding was also demonstrated. These units consisted of slabs containing 110 square feet of area. Like the floor slabs they are also composed of ground units secured together by steel rods under tension, and assembled in panels 16 feet long by 6 feet 8 inches in height. The rapidity and ease with which the panels were erected was of considerable interest to those watching the demonstration.

The building containing 88,000 cubic feet was actually not just an idle experiment. It will become

(See Page 38)

Strestcrete slab roof on home being built in Sacramento, California.

Some 2000 sq. ft. of roof was laid in place in 3½ hours recently.

MORRIS PLAN BUILDING IN SAN FRANCISCO IS BEING REMODELED

The Morris Plan Company Building in San Francisco is being given a "face lifting" to modernize the appearance of the structure and to provide more space for the company.

The entire ground floor front on Market Street will be occupied by the Morris Plan offices and banking facilities.

Balance of the building will contain general offices.

A seven foot base of Andes Black Granite with the wall above of Colorado Yule Marble; cast aluminum spandrels with metal sash and an oval vestibule entrance of moulded architectural glass, will include some of the improvements.

BLISS & HURT, TRUDELL & BERGER, Architects

DINWIDDIE CONSTRUCTION COMPANY, Contractor

REVISIONS AND RECOMMENDATIONS NATIONAL BUREAU OF STANDARDS

A recommended revision of Gas Floor Furnaces, gravity circulating type, has been submitted to manufacturers, distributors, and users for consideration and approval. It provides requirements covering mechanical venting devices; several adjustments designed to clarify the intent of certain paragraphs and to improve technical requirements of others.

Simplified Practice Recommendation R207-49, Pipes, Ducts, and Fittings for Warm Air Heating and Air Conditioning, are now available. Consists of simplified list of pipes, ducts, and fittings for gravity and forced air heating and air conditioning; includes sketches and dimensions for four types of take off fittings for extended plenum systems as well as sketches intended as an aid to identification of the items listed.

Commercial Standard CS120-48, covering Standard Stock Ponderosa Pine Doors. Covers five grades and includes layouts for house, garage, cupboard, combination, French, summer, storm, and toilet doors and sidelights made from Ponderosa pine that has been properly kiln dried. Includes illustrations for 103 different stock designs from which selection can be made that will harmonize with various architectural styles.

Copies of this material is available from the Superintendent of Documents, Government Printing Office, Washington, D. C.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Lay Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregan.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Ramberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 115 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; John G. Richards, 2nd Vice-President; Hugo W. Osterman, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

SCHOLARSHIP AWARDED ON ATOMIC AGE ARCHITECTURE

Arthur E. Burton, instructor at Iowa State College and associate engineer of the U. S. Atomic Energy Commission, has been granted the $1,500 Langley Scholarship from The American Institute of Architects to perform research on atomic age architecture, according to an announcement by Edmund R. Purves, Executive Director of the A. I. A.

Burton will carry on research during this year on the problems presented in the design of laboratory buildings and equipment used for atomic energy research.

* * *

CALIFORNIA APPOINTS SCHOOL PLANNING REPRESENTATIVES

To implement the task of planning for $1,300,000,000 in California school construction by 1954, the California State Department of Education has appointed three Field Representatives in School Planning, according to D. Charles W. Bursch, Assistant Chief, Division of Public School Administration.

The needs of California's rapidly expanding school population are being met through a sound progress of redistricting decided by community elections.

PRODUCER'S COUNCIL EXHIBIT IN SAN FRANCISCO

The San Francisco Chapter of the Producer's Council recently unveiled an exhibit of forty building products of interest to architects, engineers and contractors.

The Producer's Council, affiliated with the American Institute of Architects since 1923, has been for some time actively sponsoring studies and surveys designed to reduce construction costs. According to Don W. Lyon, district sales manager of the Libbey-Owens-Ford Glass Company, and president of the San Francisco Chapter of the Producer's Council "costs of on site construction have been materially reduced on many subjects by modular coordination." This is a plan designed to reduce wastes by coordinating the dimensions of basic building materials. The Council has been sponsoring this program jointly with the A. I. A.

During the year of 1948 the A. I. A. and the Producer's Council instituted a product literature competition to give architects the opportunity of selecting for a jury award samples of product literature deemed of particular value of the architects.

The exhibit was held at the St. Francis Hotel in San Francisco.

STEEL PRODUCTION DECLINES

Steel production declined in June for the third consecutive month and fell to the lowest point in more than a year, according to a report by the American Iron and Steel Institute.

Furnaces operated at an average of 82.2 per cent of capacity and produced some 6,501,332 tons of ingots and steel for castings which was a drop of more than 1,000,000 tons from the previous month.

SCHOOL BONDS APPROVED

Voters of the East Side Union High School District of San Jose (California) have approved a bond issue of $1,400,000 for the construction of new High School buildings at White Road and Alum Rock Avenue.

Kress and Gibson, architects, of San Jose will design the new buildings.

Recognized Everywhere!
• Best Materials
• Finest Workmanship
• Trouble-free Valves and Fittings
• Complete Sanitation
Specify HAWS—and be sure!
IT'S HAWS FOR HIGHEST QUALITY
Write today for '49 HAWS Catalog.
HAWS SANITARY DRINKING FOUNTAINS ELECTRIC WATER COOLERS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Harry W. Bolin, President; E. C. Hillman, Vice-President; Robert Short, Secretary-Treasurer. Directors: S. B. Barnes, Lewis Osborne, John Case, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA will hold their 1949 Convention in Yosemite Valley on October 13-15, 1949. Headquarters will be at the Ahwahnee Hotel.

AMERICAN SOCIETY OF CIVIL ENGINEERS MEETS IN MEXICO

Utilization of the hydraulic Resources of Mexico, the Federal Road Program and the construction of unusual structures headlined the Annual Convention of the American Society of Civil Engineers recently held in Mexico City.

More than 600 engineers representing numerous visitors and the five cooperating societies, Associacion de Ingenieros y Arquitectos de Mexico, Colegio Ingenieros Civiles de Mexico, Centro Nacional de Ingenieros, Associacion Mexicana de Contratistas and Colegio de Ingenieros Militares, were in attendance.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

The Structural Engineers had a "field day" on August 2nd, when the annual summer outing meeting was held at the Oakmount Country Club.

Highlights of the day included golf, baseball, swimming and a banquet that stands out as among the best ever staged by the association.

While the meeting was set aside for recreation and fun, the 1949 Convention of the Structural Engineers Association of California in Yosemite Valley on October 13-15 was dscussed and plans made for membership participation in this annual meeting.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Plans for the 1949 Annual Convention of the Structural Engineers Association of California, scheduled for October 13-15 in Yosemite Valley, are progressing to such an extent that President John Blume predicts it will be one of the best ever held by the engineers of California.

Subjects of keen interest to the engineers and speakers well qualified to discuss various phases of engineering interests have been selected. Advance reservations point to a good turn-out.

PRESENTS PAPER IN ENGLAND

Dr. Max S. Dunn, professor of chemistry on the Los Angeles campus of the University of California,

need more Efficient SPACE . . .
these better buildings can speed up your operation!
Soulé Steeline
TRADE MARK
UTILITY Buildings
A PRODUCT OF SOULÉ STEEL CO.
San Francisco • Los Angeles
Portland • Seattle
FURNISHED WITH CORRUGATED ALUMINUM, PLASTEEL OR GALVANIZED WALL AND ROOF SHEETS . . . ADAPTED FOR USE WITH CONCRETE BLOCK, BRICK OR STUCCO WALLS.
DOME TRACTOR CO. SACRAMENTO, CALIF.
DOME TRACTOR COMPANY
Sold and Erected By
SOULÉ STEEL COMPANY
1750 Army Street
San Francisco 24, California
SS-111B

will present a paper before the First International Congress of Biochemistry to be held this year in Cambridge, England.

CONTRACTORS AND EQUIPMENT MANUFACTURERS FORM COMMITTEE

A joint cooperative committee of the Construction Industries Association composed of manufacturers of construction equipment, supplies, components and materials, and the Associated General Contractors of America has been established to provide a medium through which manufacturers and general contractors can cooperate to increase efficiency in the construction industry.

Among members of the committee are Carl E. Nelson, Logan, Utah; Lyman D. Wilbur, Boise, Idaho; John MacLeod, Paramount, California; and A. L. Atherton, Seattle, Washington.

Office of the organization will be maintained at 1212 Field Building, Chicago, Ill. and the first meeting is scheduled for mid-September.

UNITED STEELWORKERS EDUCATIONAL CONFERENCE

A steelworkers educational conference, presented by the Institute of Industrial Relations and the University of California Extension in cooperation with the United Steelworkers of America, C.I.O., was held on the Los Angeles U. C. campus the latter part of August.

Speakers included Edgar L. Warren, director of the Institute of Industrial Relations, U. C. L. A.; Charles J. Smith and Arnold Campo, United Steelworkers of America, C.I.O.; Walter K. Kingson, division of radio, U. C. L. A.; Abbott Kaplan, labor-management relations, U. C. L. A.; and Arthur Carstens, Irving Bernstein, and Robert Tannenbaum of the Institute of Industrial Relations, U. C. L. A.

PACIFIC COAST BUILDING OFFICIALS CONFERENCE

The regular August meeting of the Central District of the Pacific Coast Building Officials Conference was held in San Francisco with a large attendance devoting a program to the general discussion of building code problems.

ENGINEER MOVES

Robert D. Dalton, Consulting Structural Engineer, has moved his Oakland offices to 374 17th Street, Oakland, California. Other offices are maintained in Berkeley, California, at 1320 University Avenue.

The University of California at Los Angeles was one of the nine institutions recently elected to active membership in the Engineering College Research Council of the American Society for Engineering Education.

Now off the press

Here is the 1949 edition of the Halsey Taylor Catalog. It shows the complete line of modern Halsey Taylor Drinking Fountains ... for schools, public and office buildings, hospitals, etc. Why not write for your copy now?

THE HALSEY W. TAYLOR CO., Warren, Ohio

Halsey Taylor

DRINKING FOUNDATIONS

A-3

West Coast Plant, Redlands, Calif.

We are pleased to announce the appointment of

WESTERN ASBESTOS CO.

San Francisco • Oakland • Sacramento
Stockton • Fresno • San Jose

As Franchise Distributors for

SONO-THERM

STRUCTURAL INSULATING BOARD

Complete Stocks, Technical and Installation Service, Available for Northern California and Western Nevada

Sono-Therm Company, Inc.

Berkeley, California

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Gallitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. MacJennett, Mueller Brass Company, 475 Ninth Street
Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

Introducing:
DON W. LYON

Don W. Lyon, Chapter President and District Manager of Libbey-Owens-Ford Glass Co.

We know he needs no introduction to the membership, but few of us know of his past. He is a transplanted Mid-Westerner who is living in California for the third time in three decades and says he hopes is becomes permanent this time.

He was born in South Dakota. Attended high school in Long Beach and Berkeley but returned to the Swelterbelt to study architecture at the University of Michigan. After graduation he worked with such firms as Marshall Field and Montgomery Ward before being attracted to a field which had both apparent and transparent advantages.

DON W. LYON
Chapter President and District Manager, Libbey-Owens-Ford Glass Company

He was an Infantry Reserve Officer in Kansas City early in 1941 when he got caught in a game of military musical chairs. He wa transferred from the Infantry the Engineers, to the Air Force. Th Air Force lost and Don has bee around it ever since. During th war he spent several ho-hum yea in the states, graduated from Cor mand and General Staff Schoo then spent several years, not s ho-hum, in the South Pacifi Emerging seven battle stars lat as a Lt. Colonel he was promote to a civilian and assigned to h present position in 1946.

Don's hobbies are photograph and thinking up new ways to us flat glass. He says his most su cessful achievement along thes lines is the glass backstop at Sea Stadium. Married he has a so Don Jr., and a daughter, Virgini

---

NATIONAL NEWS:

Five-room Industry Engineered homes are being sold to veterans at prices as low as $6,000, complete with land and utilities, James M. Ashley, president of the Producers' Council, national organization of building products manufacturers, stated recently.

"These low-priced homes which have a floor area of 788 square feet were developed jointly by the Council and the National Retail Lumber Dealers Association, to demonstrate a set of principles which permit substantial reductions in the cost of constructing homes," Mr. Ashley said.

"Builders who are seeking means of building well-planned homes at minimum cost will do well to consider those developed in the industry engineered housing program, in which scores of industry technicians cooperated.

"Hundreds of the engineered homes have been constructed in various parts of the country and, now that the possibilities for economy have been widely demonstrated, it is believed that many more will be built in the future.

"One feature which reduces the amount of time required to complete the houses is the roof truss which makes it possible for much of the inside work to be completed before the partitions are put in place, thus giving workmen much greater freedom to move about.

"A study conducted by the Small Homes Council of the University of Illinois demonstrated a saving of 10 per cent in labor cost alone through adoption of the principles adopted in the program.

"The use of modular materials and the fact that the houses were designed on the modular basis to accommodate the dimensions of the materials

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

also contributed to the reduction in building cost."

LOCAL NEWS:

At our July meeting, our president Don Lyon presented an Award of Merit to Michael & Pfeffer for the First Product Literature competition sponsored jointly by the A.I.A. and the Council. Although they are not Council members, the competition was open to all in the building industry.

COMING EVENTS:

Our president has announced that at our next regular meeting, Tuesday, August 23, our speaker will be Douglas Whitlock, Chairman of the Building Products Institute. Many of you recall that Whitlock is past president of the Producer's Council, and he is now the Council's representative for the Structural Clay Products Institute. Plan to attend this interesting meeting. The theme will be "To Improve Public Attitude in the Construction Industry."

It won't be long before we are again ready for the Christmas Jinx. More information will be passed on to you as it is received. Here is your Committee:

General Chairman, Chuck Kraft; Production Chairman, George Conely; Invitations, Ray Brown; Reservations and Tickets, Gerry Barr.

NEW MEMBER:

We welcome the Stran Steel Division of Kraftile Co. as a member. We know that our association with them will be as congenial as it has been with Kraftile these many years.

INSTRUCTION IN HOME BUILDING

The University of California Extension will offer instruction in home building, decoration, and furnishing this Fall, according to Dr. Paul H. Sheats, associate director.

Scheduled for mid-September are classes in real estate principles, architectural drafting, gardening and landscaping, structural pest control, introduction to city planning, interior design, planning the small house, furniture engineering, cabinet construction, house design, Los Angeles Building Codes, construction costs, and interior design.

A. J. GLASSOW APPOINTED PONDEROSA PINE DIRECTOR

A. J. Glassow, general manager and vice president of Brooks-Scanlon, Inc., Bend, Oregon, has been appointed a Director of Ponderosa Pine Woodwork to fill a vacancy on the Board.

He is also president of the National Lumber Manufacturers Association.

DEPARTMENT STORE: Stolte, Inc. of Monterey have been awarded a $250,000 contract for the construction of a 1-story and mezzanine department store building in Salinas. W. D. Peugh, San Francisco, is the architect.

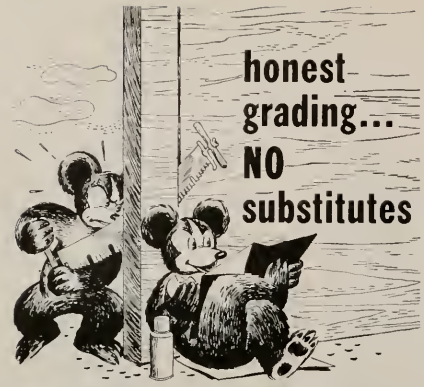
SHE'S LOVELY
SHE'S EFFICIENT
SHE USES APPLIANCES

And she can thank her architect for specifying **Certified Adequate Wiring,** which makes it all possible. She's lovely, because electric appliances give her more time for rest, relaxation and personal care. She's efficient because appliances save time and work in nearly every household chore. And she's lucky, too . . . because many homes being built today have skimpy wiring installations which cannot carry the new electrical load required for truly modern living.

Are your clients lovely? Efficient? Lucky? Do you specify **Certified Adequate Wiring?**

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street, San Francisco 3



E. K. WOOD LUMBER CO.

GENERAL OFFICES: P. O. Box 1618, Oakland, California
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK
Specify it in your home
Available through Lumber Dealers
LOS ANGELES
601 W. 5th Street
Phone MIchigan 6294
SAN FRANCISCO
333 Montgomery Street
Phone DOugles 2-3883
J.H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.

HEADLINE NEWS & VIEWS

By E. H. W.

WHO'D a thunk it! Since 1930 the number of new houses has risen faster than the population.

* * *

"INEVITABLY we must question ourselves as to whether we have done all we can or should do to start young men off in the careers they have chosen."—Richard J. Gray, A.F.L.

* * *

THE San Francisco Museum of Art will sponsor its First Annual Pacific Coast Decorative Arts Competition this fall. Competitors must be residents of Washington, Oregon, or California.

* * *

"SINCE shopping centers have become such an essential part of the city and neighborhood growth, it is of greatest importance that they be well planned and well fitted into the physical and economic framework of the community."—Urban Land Institute of New York.

* * *

FAITH! Business was recently urged to "abandon its foxholes of fear and regain the faith that built America—faith in ourselves, faith in our ability, and faith in the future."—Charles Luckman, president Lever Bro's.

* * *

NEW industrial plants and expansions in the Bay Region and Northern California for the month of May totaled 39 projects with an investment of $11,486,450.

* * *

"INCREASE sales and advertising efforts in order to stimulate more business and greater employment."—Herman W. Steinkraus, president Chamber of Commerce of the U. S.

* * *

"ACTIVITY in the school building field is increasing largely because authorities realize that they can wait no longer for 'more favorable' conditions."—R. H. Jacobs, Minneapolis-Honeywell Regulator Co.

* * *

BUSINESS conditions in San Francisco during the first four months of this year were better than the same period of last year—construction was up 135 per cent.

* * *

MEMBERS of Congress are proposing a new office building that would be constructed at a cost of $52.00 per cubic foot—as against the prevailing price in Washington of $10.00. As a taxpayer, you should be interested.

IN THE NEWS

STUDENTS HEALTH CENTER

John C. Funk, architect, San Francisco, has been selected to design a $700,000 Students Health Center Building on the University of California at Davis.

MASONRY INDUSTRY OFFERS APPRENTICESHIP FUNDS

The Masonry Industry Apprenticeship Committee of San Francisco recently made available a fund of $4,000 to aid the San Francisco School Department in its supplementary training program for mason apprentices.

Funds contributed will pay for well over half the entire cost of the school program.

SCHOOL BONDS VOTED

The voters of Salinas, California, recently approved at a special election, the issuance of a $2,500,000 bond issue with the funds to be used in the construction of new grammar schools and some additions to the present grammar schools.

Chas. E. Butner, Salinas, is the architect for the project.

APARTMENT BUILDING

Joseph H. Siino of Pittsburg (California) has announced he will construct 45 apartments and 5 stores in a new building in Pittsburg at an estimated cost of $250,000.

A. A. & A. Mack, Cantin of San Francisco, are the architects.

DOWN TO RIO

Verne Ketchum, chief engineer of Timber Structures, Inc., Portland, Oregon, will present a paper before the First Pan American Engineering Congress in Rio de Janeiro this month. Subject will be "Modern Structural Timber Developments" and covers the field of timber fabrication.

SCHOOL BIDS REJECTED

The Modesto Board of Education recently rejected a bid of $108,600 for the construction of a new Tuolumne Grammar School building of 5 classrooms, offices and toilet, and of frame and stucco construction.

Swartz & Hyberg of Fresno are the architects.

LIGHTING CONFERENCE

The annual conference of the Illuminating Engineering Society, scheduled for September 19-23 at French Lick, Indiana, offers a technical program including 32 papers on all phases of lighting problems.

Highlight of the conference will be a "Symposium on Color" a topic challenging to scientists and laymen alike.

RAISING FUNDS FOR CHURCH

The Redeemer Lutheran Church of Chico (California) is engaged in a fund raising campaign to obtain $50,000 for the construction of a new church building. Drawings have been prepared by Vincent G. Raney, Architect, San Francisco.

APPOINTED DISTRIBUTOR

The Western Asbestos Company has been appointed franchised distributors for Sono-Therm Structural Insulating Board for Northern California and western Nevada, according to a recent announcement by Fred Diamond, president of the Sono-Therm Company, Inc. of Berkeley, California.

New
TURRET
INDUSTRO-LUX
More efficient, more practical . . . and with a higher safety factor . . . this new RLM Certified industrial fluorescent luminaire epitomizes the spirit of the SMOOT-HOLMAN organization . . . which strives not merely to manufacture, but to achieve, day by day . . . so that it may offer equipment just a little finer than anything else in the bright field of illumination.
ILLUMINATION EQUIPMENT
SMOOT-HOLMAN
INGLEWOOD, CALIFORNIA
MADE IN U.S.A.
Offices in Principal Western Cities—Branch and Warehouse in San Francisco

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CEDARWALLS
WONDER-COTE PROCESS
Red Cedar Shingle Sidewalls
9 attractive colors and white.
Machine grooved and carton packed at Factory.
Write for Name of your Local Dealer
SIDEWALL LUMBER CO.
1994 Oakdale Ave. San Francisco 24 ATwater 2-8112

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

BOLD AND IMAGINATIVE METHOD OF CONSTRUCTION

(From Page 28)

a permanent part of the manufacturing plant, and will house special tables and jogs for the assembling and handling facilities and a rod-straightening unit. This latter unit will permit the company to purchase reinforced steel in coils. Cut off and threaded equipment wil eliminate waste and speed assembly.

Bend and shear tests of Strestcrete slabs were also conducted. These tests were similar to a very also conducted. These tests were similar to a very complete series recently conducted under the supervision of Hugh M. O'Neil Co., Structural Engineers of Oakland, California, where duplicate tests were made on Strestcrete slabs both with and without pre-stress in the reinforcing rods. The tests consistently demonstrated the following facts: (1) Prestressing importantly reduces deflection as compared with no pre-stress under identical conditions. (2) With pre-stress, first tension cracks show up under substantially higher loading than with no pre-stress under identical conditions. (3) In the case of all the pre-stress slabs tested, no initial tension cracks developed at design loading. This was not true in the case of test slabs which were not prestressed. (4) Under the repeated load test, permanent set was substantially less than with no prestress.

Mr. A. G. Streblow, President of the Company and Chief Engineer, D. O. McCall and staff have felt that light-weight concrete units with pre-stressed steel could be produced in the form of beams, roof and floor slabs, and wall sections which would have strength characteristics equal to those of monolithic concrete. The demonstration together with extensive tests which have been conducted substantiates this belief.

This new product was developed with the thought in mind of speeding construction and with the hope of reducing the cost of building permanent concrete structures.

Slabs and panels of various thicknesses from 3 to 12 inches are assembled in widths up to 8 feet. For roof construction, slabs that span 32 feet are practical. Tongue and groove siding, and roof and floor slabs may be assembled to the customer's specified dimensions.

The preview of the application of their new material was arranged to introduce the design fraternity to a new principle in construction. Strestcrete is not so much a system of construction as it is the application of a principle, and it is the company's hope that Architects and Engineers will develop new uses for the material in the various types of construction in which they specialize.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

1949 HEATING, VENTILATING AND AIR CONDITIONING GUIDE. By American Society of Heating and Ventilating Engineers, 51 Madison Ave., New York 10. Price $7.50.

Contains 992 pages of technical data, and 392 page catalog section representing 249 manufacturers. The 52 chapters of this 27th edition of the GUIDE are grouped into the following sections: Principles, Human Reaction to Atmospheric Environment, Heating and Cooling Loads, Combustion and Consumption of Fuels, Heating Systems and Equipment, Air Conditioning, Special Applications and Installation and Testing Codes.

Technical and catalog sections are completely cross-indexed for ready reference.

HOUSING & TOWN and COUNTRY PLANNING. United Nations 1949 IV 2. Columbia University Press, Morningside Heights, New York. Price $1.00.

Edited and prepared by the Department of Social Affairs of the United Nations, Lake Success New York, this bulletin covers the subjects of "Organic Neighborhood Planning", "Government and the Homes of the People", Rural and Urban Housing, Research, Codes, prefabricated housing and numerous other phases of planning. Many designs, drawings and photographs are used to illustrate text. Final portion of the booklet contains a comprehensive bibliography.

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

115. STEAM COIL CATALOG

A colorful, informative, catalog covering complete line of steam coils has been prepared by Marlo Oil Company, St. Louis, manufacturers of ball-bonded heating and cooling coils and heat transfer equipment. Designed for quick reference, the new Marlo catalog contains illustrations of the Marlo standard steam coil and standard non-freeze steam coils, with factual, simplified descriptions, including easy to use dimensional data, capacity ratings and coil selection charts. AIA File No. 30-F, 36 pages illus.

116. MARBLE FORECAST: The new Marble Forecast for 1949-1950 is now available from Marble Institute of America. Compilation of information shows both foreign and domestic availabilities and is a valuable reference source. A.I.A.-22A, 8 pages illus.

117. ROTO-LOCK: A folder describing Roto-Lock, a new butt-joint fastener developed by the Simmons Fastener Corporation, Albany, New York, has just been released. Application of Roto-Lock is illustrated; also large dimension drawings, load rating tables and cut-away views of fastener in operation. A.I.A. 17-F(NN), 4 pages illus.

ARCHITECT AND ENGINEER,
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

115 116 117

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after August 15th.—A. & E.)

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834
GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer
REPUBLIC STEEL
See Sweet's Catalog File or write us for full information.
REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO
DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. 5-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT
Pumping Machinery for Every Purpose

For Service Call DOuglas 2-6794 or MUtual 8322
SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.

SAN FRANCISCO, CALIF. **HEMLOCK 4100**

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco - DO 8311

THE ARCHITECT IN CIVIC AFFAIRS

(From Page 9)

and the Land Clearance Commission is considering the selection of additional redevelopment areas in other parts of the city. Likewise the Chicago Dwelling Association should be able to start soon on its initial project.

All this appears to be a very cumbersome procedure, and it is. Every action taken must be approved by the City Council and State Housing Board. People living in redevelopment areas are generally opposed to slum clearance. They fear that their individual lots will be worsened, and in some cases that may be true. Those who can qualify for low-rent housing will be provided for in relocation projects. Some will be able to move back into the new development. An intermediate group will have to depend on housing that becomes vacant in the general reshuffle, and they may have considerable difficulty in rehousing themselves even though they are given all possible assistance. Thus it is easy to understand why slum clearance is not popular with some of those most intimately concerned with it. Nevertheless it is essential for the future of Chicago, and every effort must be made to expedite its progress.

Another primary deterrent to housing construction in Chicago is high cost. It is essential that builders and architects make every effort to bring the cost of adequate housing within the reach of the maximum number of consumers. High costs of building and a relatively fixed return have combined to discourage new rental housing so much needed in this community.

One important factor contributing to the high cost of construction is Chicago's outdated building code. A new and modern code was drafted by John Merrill with the expert assistance of some of Chicago's best architects, engineers, and builders. Seventeen months ago the City Council began hearings on the Code presumably to lead to its adoption. Today the City is still without a new code and the prospects do not appear particularly bright. Results to date in securing the adoption of the new performance standard code show a lack of concern for the public interest on the part of certain members of the City Council. Vigorous and sustained opposition to the new code has come from vested interests in the plastering trade fearful that a modern code would result in the use of substitute materials in certain types of construction. A building code is supposed to provide for the safety of the public. Nationally known experts in fire protection and housing have testified in favor of the new Chicago code but to no avail. The

See Page 43)

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$31.00 per M—truckload lots, delivered.

Face Brick—$80.00 to $105.00 per M, truckload lots, delivered.

Fire Brick—Per M—$90.00 to $125.00.

Cartage—Approx. $9.00 per M.

Paving—$75.00.

BUILDING PAPER & FELTS

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.20
30-lb. roll	2.93
Campcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$3.13
Deadening felt, 1-lb.	3.69
Asphalt roofing, 15 lbs.	2.40
Asphalt roofing, 30 lbs.	3.60
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$1.75
Medium	2.04
Heavy	2.40
Extra Heavy	2.77

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	$4.75
Nails, per keg, base	$10.55
8 in spikes	10.55
8-in Knob lock sets	1.80
Butts, dull brass plated on steel, 3½x3½	.73

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock ¼" to ¾"	2.38	2.94
Crushed Rock ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88
Cement—		
Common (all brands, paper sacks), carload lots, $3.38 per bbl. f.o.b. car; delivered		$3.60.
Per Sack, small quantity (paper)		$1.00
Carload lots, in bulk per bbl.		2.78
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.		
Cash discount 2% on L.C.L.		
Trinity White, Medusa White	1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.	

CONCRETE READY-MIX—

1-2-4 mix, to 10 yards*	$11.75
10 to 100 yards*	10.75
Over 100 yards*	10.25

* Delivered to site.

Concrete Blocks—	Haydite	Basalt
4x8x16-inches, each	$.16	$.16
6x8x16-inches, each	.21	.21
8x8x16-inches, each	.25	.25
12x8x16-inches, each	.33	.60
12x8x24-inches, each		.60
Haydite Aggregates—		
¾-inch to ⅜-inch, per cu. yd.		$6.50
⅜-inch to ⅛-inch, per cu. yd.		6.50
⅛-inch to 0-inch, per cu. yd.		7.00

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. ¼"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

⅜ x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

⅜ x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

⅜" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .25 per □ ft.
Double Strength Window Glass	.35 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
¼ in. Polished Wire Plate Glass	1.70 per □ ft.
¼ in. Rgh. Wire Glass	.40 per □ ft.
Obscure Glass	.45 per □ ft.

Glazing of above is additional.

Glass Blocks—$2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool insulation—
(2")..... $45.00 per M sq. ft.
Cotton insulation—Full-thickness
(3⅜")..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.
Tileboard—4'x6' panel..... $9.00 per panel
Wallboard—½" thickness..... $55.00 per M sq. ft.
Finished Plank..... $69.00 per M sq. ft.
Ceiling Tileboard..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common..... $85.00 per M
No. 2 Common..... 83.00 per M
Select O. P. Common..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 6 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	18c to 20c per ft.
Plyscord	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ⅝" x 24/26 in handsplit tapered or split resawn, per square..... $15.25
⅜" to 1½" x 24/26 in split resawn, per square..... 17.00
Average cost to lay shakes,— 8.00 per square

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, Copper Bearing, per carloads, per 100 sq. yds..... $35.50
Standard Ribbed, ditto..... 37.70

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work..... per yard 85c
Three-coat work..... per yard $1.10
Cold water painting..... per yard 25c
Whitewashing..... per yard 15c
Turpentine..... $1.85 per gal. in 5-gal. cont.
Raw Linseed Oil..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

8-inch..... $2.50 lineal foot
8-inch..... 3.00 lineal foot
10-inch..... 4.00 lineal foot
12-inch..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hat roll channels metal lath (lathed only)	3.00
Seilings with ¾ hat roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.

Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Cedar in place, 4½ in. exposure, per square..... $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square..... 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square..... 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure..... $24.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure..... $29.00
1 x 25" Resawn Cedar Shakes, 10" Exposure..... 22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton..... $99.50
Vitrified, per foot:
Standard, 8-in..... $ .62
Standard, 12-in..... 1.09
Standard, 24-in..... 4.72
Clay Drain Pipe, per 1,000 L.F. in carload lots:
Standard, 6-in..... $211.00
Standard, 8-in..... 352.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvanized iron, 65c sq. ft. (flat).
Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill
$270 per ton erected, when out of stock

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd.	$7.15
⅜-in. Rd.	6.40
½-in. Rd.	6.20
⅝-in. Rd.	6.00
¾-in. & ⅞-in. Rd.	6.00
1-in. & up	5.95

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.75 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$2.00 per sq. ft.
Asphalt Tile Floor ⅛" x ⅜"—$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—
Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.25 sq. ft
4 x 6 x 12	1.50 sq. ft
2 x 8 x 16	1.45 sq. ft
4 x 8 x 16	1.75 sq. ft

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x3-inches, per M	$124.00
12x12x4-inches, per M	139.50
12x12x0-inches, per M	176.00

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

THE ARCHITECT IN CIVIC AFFAIRS

(From Page 40)

Chicago Plastering Institute, thru its spokesman, himself no expert in anything unless it be the application of plaster and influence on politicians, says that the code will permit unsafe construction. No valid evidence has been introduced, and no competent expert has substantiated such testimony; but so far action has been successfully blocked. Interminable delays in the enactment of the new code have cost Chicagoans thousands of dollars and further delayed the end of the housing shortage. Now there appears to be grave danger that when the code finally is reported to the Council for passage it will be changed to suit the plastering interests. How long can the people of this community permit a small group of selfish individuals to stand in the way of civic progress?

Perhaps I have said enough about Chicago's problems to prove that there is need for an enlightened spirit of civic service on the part of its citizens. Certainly for professional people in general and for architects in particular there are great opportunities to work for the public welfare. We should not rest until we are assured that our city has become the best possible place in which to work, to live, to educate our children and to enjoy the benefits of our American free society.

Members of the Chicago Chapter of the American Institute of Architects have taken a leading part in the life of the city and the nation. I hope that more of you will not only build the city's structures but will build the fabric of the city itself in the years to come.

I greatly appreciate the honor you have bestowed on me tonight. I am gratified to be associated in some small way with an organization of such fundamental importance to human welfare.

HAMILTON AIR FORCE

Efforts to rehabilitate certain buildings in zone 1 and 4 at the Hamilton Air Force base in Marin county, were halted by rejection of bids recently. Amount of the costs submitted were $51,477 and this was too high according to the U. S. Army purchasing and contracting office at the field.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to April, 1949.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	Santa Clara	Solano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	2.81¼	2.81¼	2.81¼	2.50	2.81¼	3.00	2.81¼	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.0375	2.0375	2.0375	2.0375	2.1125
CEMENT FINISHERS	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
ELECTRICIANS	2.50	2.40	2.40	2.25	2.40	2.40	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.12½	2.17½	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.2375	2.2375	2.2375	2.2375	2.2375
STRUCTURAL STEEL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.1125	2.1125	2.1125	2.1125	2.1125
STRUCTURAL	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
CONCRETE	1.52½	1.52½	1.52½	1.42½	1.52½	1.42½	1.52½	1.52½	1.4875	1.4875	1.4875	1.4875	1.4875
LATHERS	2.81¼	2.81¼	2.81¼	2.81¼	2.00*	2.50*	2.81¼	2.81¼	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.2375	2.2375	2.2375	2.2375	2.2375
PLASTERERS	2.25*	2.50*	2.50*	2.25*	2.25*	2.25*	2.50*	2.81¼	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.00*	2.25*	2.25*	1.77½	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.16	2.16	2.16	1.87½	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.12½	2.12½	2.12½	2.12½	2.30	2.40	2.12½	2.12½	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.37½	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	2.81¼	2.81¼	2.81¼	2.25*	2.81¼	2.81¼	2.81¼	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.67½	2.67½	2.67½	2.15	2.00	2.67½	2.67½	2.43¾	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

IMPORTANT INFORMATION pertaining to the construction industry throughout northern California is contained in the DAILY REPORTS. Subscribe NOW, only $10 per month. ARCHITECTS REPORTS, 68 Post Street San Francisco.

GET THE BEST, don't be satisfied with anything but the best. Window sash, Doors, Cabinets, etc. Town Talk Sash & Door Mill. 624 9th St., Sacramento.

WANTED! A market for the complete output of a sizeable redwood shingle mill; Write Box W, Architect & Engineer, 68 Post Street, San Francisco.

ADVERTISERS wishing to sell building materials and products, GET THE BEST RESULTS from regular advertising schedules in ARCHITECT & ENGINEER magazine. Write for complete information, including rates, circulation, etc., 68 Post Street, San Francisco.

FLOOR COVERINGS for industrial, commercial and residential construction. Complete lines, one of the oldest, best established organizations in the Sacramento Valley. LATTIN'S, INC., 1519 Alhambra Blvd., Sacramento.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

CHURCH—APTOS, SANTA CRUZ COUNTY: Aptos Community Methodist Church, owner; $25,000. ARCHITECT: Floyd B. Comstock, Walnut Creek; frame construction. SUPERINTENDENT OF CONSTRUCTION: Ray Larson.

RESIDENCE—WOODSIDE, SAN MATEO COUNTY: Mr. Marthens, owner; $70,000. ARCHITECT: Leslie I. Nichols, Palo Alto; 1 story frame construction, shake exterior, concrete floors, radiant heating. GENERAL CONTRACTOR: Aro & Okerman, Palo Alto.

GRAMMAR SCHOOL—DOS PALOS, MERCED COUNTY: Dos Palos Elementary School District; $258,490. ARCHITECT: Robert C. Kaestner, Visalia; frame and stucco construction. GENERAL CONTRACTOR: Clarence Ward Construction Co., Fresno.

NEW HOSPITAL BUILDING—SACRAMENTO, SACRAMENTO COUNTY: Fairhaven Home For Girls, Sacramento; $180,000. ARCHITECT: Raymond R. Franceschi, Sacramento; 1 story, frame and stucco construction, composition roofing, asphalt and rubber tile, masterpave, steel sash, concrete floors and radiant heating. GENERAL CONTRACTOR: Lawrence Construction Co., Sacramento.

MEN'S CLOTHING STORE REMODEL—SAN FRANCISCO: Hasting Store, owner; $301-976. ARCHITECT: Clifford Conly, Jr., San Francisco; 6 story and basement; interior and exterior remodel, stone veneer and Plate Glass front. GENERAL CONTRACTOR: H. L. Petersen Construction Co., San Francisco, $239,776.

HIGH SCHOOL ADDITION, GRAMMAR SCHOOL—GREENVILLE, PLUMAS COUNTY: Greenville Unified School District, owner; 4 classrooms, shop building and toilet rooms, $195,053; 4 classrooms, shop building and toilet rooms, $125,998. ARCHITECT: Thomson & Evans, Oakland; structural steel frame, and frame and stucco construction. GENERAL CONTRACTOR: Clem Anderson, Alameda.

AUDITORIUM & ART CENTER BUILDING—RICHMOND, CONTRA COSTA COUNTY: City of Richmond, owner; seating 3,700; $1,735,900. ARCHITECT: Milton L. Pflueger, San Francisco; 3 story; reinforced concrete and structural steel construction, approximately 107,000 square feet. GENERAL CONTRACTOR: Clinton Construction Co., San Francisco.

BEVATRON BUILDING—BERKELEY, ALAMEDA COUNTY: University of California, owner; cyclotron area, $792,635. ARCHITECT: Masten & Hurd, San Francisco; STRUCTURAL ENGINEER: Huber & Knapik, San Francisco; reinforced concrete construction, contains offices and shops. GENERAL CONTRACTOR: Pacific Coast Builders, San Francisco.

GRAMMAR SCHOOL ADDITION—POINT ARENA, MENDOCINO COUNTY: Point Arena Elementary School District, owner; 1 classroom and toilet rooms, $22,794. ARCHITECT: C. A. Caulkins, Santa Rosa; frame and stucco construction. GENERAL CONTRACTOR: Robert R. Todd, Santa Rosa.

EXHIBIT BUILDING—2 CATTLE BARNS—LAVATORY BUILDINGS — VALLEJO, SOLANO COUNTY: County of Solano, owner; $137,146. ARCHITECT: Harry J. Devine, Sacramento; Exhibit Building: 60x246; concrete block construction; Barns: 40x200; concrete block construction. GENERAL CONTRACTOR: J. A. Bryant, Vallejo.

CHURCH—MENLO PARK, SAN MATEO COUNTY: Roman Catholic Archbishop of San Francisco, owner; seating 300, St. Anthony's Mission, $43,791. ARCHITECT: J. Clarence Felciano, Santa Rosa; frame construction. GENERAL CONTRACTOR: Conway & Culligan, San Mateo.

JUVENILE HALL—HOLLISTER, SAN BENITO COUNTY: County of San Benito, owner, $57,330. ARCHITECT: E. Geoffrey Bangs, San Francisco; 3,334 square feet; reinforced concrete construction; ¾ inch unbreakable windows; radiant heating. GENERAL CONTRACTOR: Geo. C. Renz, Gilroy.

RESIDENCE—DANVILLE, CONTRA COSTA COUNTY: Mr. Hickman, owner; 8 rooms, 2 baths, $36,263. ARCHITECT: Ray F. Keefer, Oakland; frame and stucco construction, brick veneer, shake roof, steel sash, concrete floors, radiant heating. GENERAL CONTRACTOR: John J. Graham, Danville.

MEDICAL BUILDING—OAKLAND, ALAMEDA COUNTY: Dr. Howard Graham, owner; $34,333. ARCHITECT: Geo. E. Ellinger, Oakland; 1 story; frame and stucco construction, concrete floors, radiant heating. GENERAL CONTRACTOR: California Builders Company, Oakland.

COOLIDGE GRAMMAR SCHOOL—MODESTO, STANISLAUS COUNTY: Modesto Board of Education, owner; 5 classrooms, offices and toilet rooms, $104,500. ARCHITECT: Swartz & Hyberg, Fresno; frame and stucco construction. GENERAL CONTRACTOR: Acme Construction Co., Modesto.

GRAMMAR SCHOOL—PORTERVILLE, TULARE COUNTY: Pleasant View Elementary School District, owner; 10 classrooms, offices and toilet rooms, $169,900. ARCHITECT: Ralph C. Flowelling & Walter L. Moody, Los Angeles; concrete block and frame construction, concrete floors, asphalt tile steel sash, steel roof, metal toilet partitions. GENERAL CONTRACTOR: Trewitt, Shields & Fisher, Fresno.

CLUB HOUSE — OAKLAND, ALAMEDA COUNTY: Central Committee for the Blind, owner; $37,000. ARCHITECT: Dragon, Schmidts & Hardman, Berkeley; 1 story concrete block and frame construction. GENERAL CONTRACTOR: Frank A. Stead, Berkeley.

RESIDENCE—ATHERTON, SAN MATEO COUNTY: ARCHITECT: Arthur D. Janssen, Atherton; frame and stucco construction; $29,000. GENERAL CONTRACTOR: Arthur D. Janssen, Jr., Atherton.

PRIMARY SCHOOL BUILDING—FOWLER, FRESNO COUNTY: Fowler Union Elementary School District, owner; $120,900. ARCHITECT: W. D. Coates & Maurice Metz, Fresno. GENERAL CONTRACTOR: Lewis C. Nelson & Sons, Selma.

PAROCHIAL SCHOOL ADDITION & CONVENT—SAN FRANCISCO: Roman Catholic Archbishop of San Francisco, owner; classrooms, $200,000. ARCHITECT: Wm. Schirmer & Wm. A. Rich, Oakland; reinforced concrete construction. GENERAL CONTRACTOR: Cahill Bros., San Francisco

GRAMMAR SCHOOL—TIPTON, TULARE COUNTY: Tipton Elementary School District, owner; $59,248. ARCHITECT: Robt. C. Kaestner, Visalia; frame and stucco construction. GENERAL CONTRACTOR: Ralph Utter, Tulare.

STORE BUILDING REMODEL—SAN FRANCISCO: Korinne Cashland, owner; $120,000 ARCHITECT. Hertzka & Knowles, San Francisco; 6 story; exterior remodel; ceramic veneer; steel sash and plate glass exterior interior remodel to lobby. GENERAL CONTRACTOR: Jacks & Irvine.

RETREAT HOUSE—NEAR SACRAMENTO SACRAMENTO COUNTY: Passionist Fathers owner; chapel, assembly room, dining room, kitchen and dormitories for 25 men $200,000. ARCHITECT: Barovetto & Thomas Sacramento; 2 story, reinforced concrete and frame construction.

ADMINISTRATION BUILDING—MONTEREY AIRPORT, MONTEREY COUNTY: Monterey Peninsula Airport District, owner; $189,99 ARCHITECT: Robt. R. Jones, Carmel; frame and stucco, native stone and redwood GENERAL CONTRACTOR: Fremont Construction Co., Castroville.

REMODEL BUILDINGS INTO GRAMMAR SCHOOL—RENO, WASHOE COUNTY: Reno School District No. 10, owner; $99,55 ARCHITECT. Ed S. Parsens, Reno. GENERAL CONTRACTOR: Walker Boudwin Construction Co., Reno.

FIRE STATION—MENLO PARK, SAN MATEO COUNTY: Menlo Park Fire District owner; $27,603. ARCHITECT: Wm. Simrell Jr. & Kingsford Jones, Palo Alto; 3,0 square feet, structural steel, frame and re wood exterior. GENERAL CONTRACTOR Tri City Builders, Belmont.

GRAMMAR SCHOOL ADDITION—SHERIDAN, PLACER COUNTY: Sheridan Elementary School District, owner; 3 classrooms and toilet rooms, $39,950. ARCHITECT: Gordon Stafford, Sacramento; frame and stucco construction. GENERAL CONTRACTOR: Robert Jerauld, Sacramento.

GRAMMAR SCHOOL ADDITION — SOLEDAD, MONTEREY COUNTY: Soledad Elementary School District, owner; 8 classrooms, offices and toilet rooms, $110,7 ARCHITECT: J. Austin Zerkle, Oakland brick and frame construction. GENERAL CONTRACTOR: F. V. Hampshire, Salinas

APARTMENT BUILDING — SAN MATEO COUNTY: M. J. Ryan, owner; 105 apartments. $952,000. ARCHITECT: Angus McSweeney, San Francisco. STRUCTURAL ENGINEER: Henry Marchand, San Francisco. 11 story; reinforced concrete construction; steel sash, asphalt and linoleum floors; 2 elevators, basement garage. GENERAL CONTRACTOR: Dinwiddie Construction Co., San Francisco.

THEATRE BUILDING—SAN JOSE, SANTA CLARA COUNTY: Beverly Amusement owner; 1200 seats, 4 stores, $250,0 ARCHITECT: A. A. & A. MacKenzie Can San Francisco; reinforced concrete structural steel roof trusses. GENERAL CONTRACTOR: Salih Bros., San Francis

RESIDENCE—SUISUN, SOLANO COUNTY: Boyd Sheldon, owner, $49,610. ARCHITECT: Leonard H. Ford, Walnut Creek; 1 story; concrete block construction, shake roof, steel sash, concrete floors, radiant heating. GENERAL CONTRACTOR: Hair Construction Co., Walnut Creek.

DENTAL BUILDING ADDITION — RICHMOND, CONTRA COSTA COUNTY: ARCHITECT: Donald L. Hardison, Richmond; 1 story; frame and stucco construction, steel sash, $41,344. GENERAL CONTRACTOR: Carl Overaa & Co., Richmond.

KYNOCK GRAMMAR SCHOOL BUILDING —MARYSVILLE, YUBA COUNTY: Marysville Elementary School District, owner; 8 classrooms, office, cafeteria and toilet rooms, $150,000. ARCHITECT: Herbert E. Goodpastor, Sacramento; frame and stucco construction; concrete floors, radiant heating. GENERAL CONTRACTOR: C. A. Otto, Marysville.

TWO FIREHOUSES — TURLOCK, STANISLAUS COUNTY: City of Turlock, owner, $77,500. STRUCTURAL ENGINEER: John H. Beatty, Turlock. GENERAL CONTRACTOR: D. G. Niel & Sons, Turlock.

WAREHOUSE & OFFICE BUILDING—SAN LEANDRO, ALAMEDA COUNTY: Lucky Stores, Inc., owner, $1,500,000. ARCHITECT: J. Lloyd Conrich, San Francisco. ENGINEER: L. H. & B. L. Nishkian, San Francisco; 1 story; 160,000 square feet; office 15,000 square feet; reinforced concrete construction, auditorium, cafeteria, recreation room, kitchen and food prepackaging building, truck repair shop, refrigeration, vegetable storage, etc. GENERAL CONTRACTOR: MacDonald, Young & Nelson, San Francisco.

RESIDENCE — SAN RAFAEL, MARIN COUNTY: Jack Wilsey, owner; 10 rooms, 5 baths, $75,000. ARCHITECT: Albert Henry Hill, San Francisco; 1 story; frame construction and swimming pool. GENERAL CONTRACTOR: Farre Bros., Ross.

DISTRICT FIREHOUSE—LIVERMORE, ALAMEDA COUNTY: County of Alameda owner, $39,400. ARCHITECT: Kent & Hass, San Francisco; 1 and 2 story; reinforced concrete and frame construction; steel sash; composition and tile roof. GENERAL CONTRACTOR: Ross Trewhitt, Carmel.

LOCKER ROOM BUILDING — LATON, FRESNO COUNTY: Laton Joint Union High School District, owner; high school locker room, $42,994. ARCHITECT: W. D. Coates & Maurice J. Metz, Fresno. GENERAL CONTRACTOR: Oscar Ellberg, Kingsburg.

STORE BUILDING — SAN JOSE, SANTA CLARA COUNTY: C. W. Downs, owner; 3 stores, $25,124. ARCHITECT: Higgins & Root, San Jose; 1 story; frame and stucco construction. GENERAL CONTRACTOR: M. W. Reese, San Jose.

SHOP BUILDING — SANGER, FRESNO COUNTY: Sanger Union High School District, owner; high school shop building, $214,435. ARCHITECT: Fred L. Swartz & Wm. G. Hyberg, Fresno. GENERAL CONTRACTOR: Clarence Ward, Fresno.

HOSPITAL ADDITION — OAKLAND, ALAMEDA COUNTY: Peralta Hospital, owner; boiler house addition, $78,880. ARCHITECT: D. D. Stone & Lou Mulloy, San Francisco; 1 story; reinforced concrete construction, boilers, equipment, etc. GENERAL CONTRACTOR: Barrett & Hilp, San Francisco.

MAIN PRISON GROUP — SOLEDAD, MONTEREY COUNTY: State of California, owner; prison buildings, $5,932,819. STATE ARCHITECT: Anson Boyd, Sacramento; consists of series of wings with connecting corridor, administration building, cell blocks, auditorium and gymnasium, chapel, kitchen and commissary, laundry, hospital, boiler plant, entrance building, sally port, fire house, garage and service station, armory, guard towers, roads, walks, yard paving, drain lines, security fencing, etc. Approximately 434,000 square feet floor area; reinforced concrete construction, steel sash and doors; composition roof, hollow concrete block and steel bar partitions. GENERAL CONTRACTOR: M & K Corporation; Fredrickson & Watson Co.; Piombo Construction Co. (Joint Venture), San Francisco, $4,488,000.

LODGE BUILDING REMODEL—COALINGA, FRESNO COUNTY: Coalinga Masonic Lodge, owner; $25,542. ARCHITECT: Fred L. Swartz & Wm. G. Hyberg, Fresno; interior remodel. GENERAL CONTRACTOR: R. T. Dealy, Avenal.

GYMNASIUM BUILDING—OAKLAND, ALAMEDA COUNTY: Oakland Board of Education, owner; Bret Harte High School, $277,700. ARCHITECT: A Lewis Koue & Wilfield H. Hyde, Oakland; 2 story; 20,000 square feet; reinforced concrete construction. GENERAL CONTRACTOR: John E. Branagh, Piedmont.

GYMNASIUM BUILDING — BENICIA, SOLANO COUNTY: Benicia Unified School District, owner; high school gymnasium building, $92,567. ARCHITECT: Geo. C. Sellon, Sacramento; reinforced concrete and structural steel construction, wood roof. GENERAL CONTRACTOR: B & R Construction Co., San Francisco.

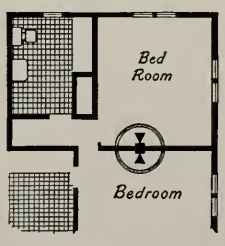
SHOE STORE REMODEL — SAN FRANCISCO: Frank Werner Co., owner, $200,000. ARCHITECT: Hertzka & Knowles, San Francisco; interior and exterior remodel. GENERAL CONTRACTOR: Jacks & Irvine, San Francisco.

STORE BUILDING — OAKLAND, ALAMEDA COUNTY: Al K. Hershberg, owner, $21,000. ARCHITECT: R. A. Hutchison, Oakland; 1 story. GENERAL CONTRACTOR: Fred F. Chopin, Oakland.

GRAMMAR SCHOOL — FRESNO, FRESNO COUNTY: Temperance-Kutner Elementary School District, owner; 8 classrooms, offices and toilet rooms, $111,500. ARCHITECT: Wm. D. Coates & Maurice J. Metz, Fresno; frame and stucco construction. GENERAL CONTRACTOR: Lewis C. Nelson & Sons, Selma.

MEDICAL OFFICE BUILDINGS—FRESNO, FRESNO COUNTY: 2900 Fresno Street Corp., owner; 5 separate buildings, $147,722. ARCHITECT: H. Rafael Lake & Elso B. DiLuck, Fresno. GENERAL CONTRACTOR: Atkinson Construction Co., Fresno.

Where to plan double telephone outlets in new homes



Adjoining rooms where your customers will spend most of their time—such as bedrooms or the living room and kitchen—are convenient spots for double outlets. The diagram above illustrates how two outlet boxes may be fastened together . . . an excellent arrangement for either portable or fixed telephones.

Complete layout includes outlet boxes, concealed wiring and a protector cabinet. New telephones can be added and old telephones moved later on should the need arise. And the cost is small. *For free help in planning, call your local Pacific Telephone Office and ask for "Architects and Builders Service."*

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

IN THE NEWS

HIGH SCHOOL ADDITION

The Liberty Union High School District of Brentwood has selected the firm of Young & Lloyd, architects, Albany, California, to design a shop building addition and swimming pool for the Brentwood High School.

ARCHITECT SELECTED

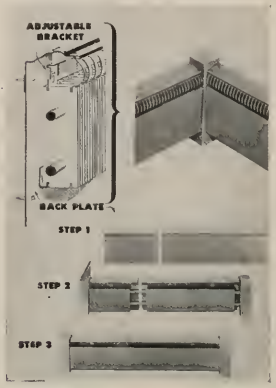
Russell G. DeLappe, Architect, Berkeley, has been selected to design plans for a new grandstand, exhibit building, and flower show building for the 25th District Agricultural Association fairgrounds in Napa.

ASSUMES NEW JOB

Prof. William H. Scheick, coordinator of the Small Homes Council at the University of Illinois, has been granted a year's leave to accept a position as the first executive director of the newly organized Building Research Advisory Board in Washington, D. C.

NEW RADIANT BASEBOARDS

A new Radiant Baseboard system needing only three steps for a finished installation has been announced by KRITZER RADIANT COILS, Inc. of Chicago, Illinois, and because of its basic simplicity is extremely economical.



A permanent unit it comes in 10-foot sections of 2" x 5½" aluminum fins mechanically bonded to two 3" center, copper supply tubes. Heat transfer plates of aluminum fins provide high efficiency convection surface and radiant effectiveness. Entire installation requires only four parts; steel back-plate, Radiant Coils, filler plates, and end posts. Complete information from manufacturer.

HOSPITAL BID REJECTED

Management of the Dearborn Hospital in Madera (California) have rejected bids of $177,000 for construction of an addition to the hospital. One story frame and stucco construction.

FAIR GROUNDS PLANS

Master plans for development of the 15th District Agricultural Association Fair Grounds at Bakersfield have been approved and include construction of a half-mile race track, 16,000 capacity stadium, agricultural building, administration building, machinery, commercial, community, educational and home economics building; horse barns, cattle barns, maintenonce building, and caretakers residence.

Cost of the project is $3,000,000. Ernest L. McCoy, Bakersfield, is the architect.

ENTERTAIN BRITONS

A British Construction Industry Productivity Team of 17 members, which have been touring the United States, was recently entertained in Washington, D. C. Traveling with Economic Cooperation Administration project manager William L. Padgett, the group were entertained jointly by the A. I. A., A. G. C., and A. F. L.

ARCHITECT MOVES

Harry Hayden Whiteley, A. I. A. Architect, has announced the removal of offices from 1423-4th Avenue, to 4205 Pacific Highway, San Diego 10, California.

HEADS PERLITE INSTITUTE

Wharton Clay has been appointed executive secretary of the newly formed Perlite Institute, on organization of manufacturers of this new lightweight aggregate for plaster and concrete mixes, with offices in New York City.

Clay was formerly secretary of the National Mineral Wool Association, and originated the National Council for Better Plastering.

BONDS VOTED

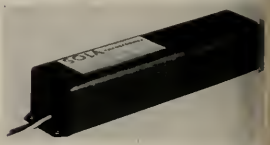
The Cities of South San Francisco and San Bruno are proceeding with plans for the construction of a $2,000,000 sewage disposal plant of reinforced concrete construction. Funds will be made available from a recent bond issue approved by voters of the area.

NEW PABCO TREASURER

Andrew S. Halley, San Francisco, has recently been appointed Treasurer of The Paraffine Companies, Inc., according to an announcement by C. C. Gibson, executive vice president of the company.

SOLA CONSTANT VOLTAGE

A new ballast with protection against fluctuating line voltages has been announced by the SOLA ELECTRIC CO Chicago, Ill.



For use in operation of two 75 watt 96 Slimline lamps this new ballast is compa in size, light weight, maintains constan wattage with low wattage loss, and quiet and cool in operation. Full inform tion from the manufacturer.

ARCHITECT MOVES OFFICES

Clifford E. Sobey, A. I. A., architect, r cently announced the removal of his offic from San Jose (California) to 125 We Main Street, Los Gatos.

MEXICO CONSTRUCTS DAMS

Eighteen dams over 50 ft. high are cu rently under construction in Mexico to i crease the irrigation area of the countr Three of the projects will also add abo

STOLTE INC.

General Contractors

—:—

OAKLAND · CALIFORNIA

STATIONERY
SCHOOL & OFFICE
SUPPLIES
•
Printing Engraving
Announcements
•
CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

CRITICAL CLIENTS PREFER—
CABOT'S COLLOPAKES

32 Lively Colors — No Adulterants Are Used

CABOT'S patented COLLO PAKING process results in a durable, Porcelain-Smooth Surface—Stays Clean—Resists the elements for years.

Write for color card, showing 32 colors.

GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO • SACRAMENTO
OAKLAND - LOS ANGELES - DENVER

Fine ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO, 11

200 million kwhr to the nation's yearly hydroelectric power output.

The earth dam is the prevailing type used in Mexico, according to J. Vicente Orozco, chief engineer of the Irrigation Division of the Ministry of Hydraulic Resources of Mexico.

NEW APARTMENT BUILDINGS

The San Francisco Housing Authority has requested a building permit be issued for the construction of three apartment buildings in San Francisco's famed Chinatown at an approximate cost of $1,950,000.

COMMERCIAL AIR DIFFUSER AND PENDANT LIGHT

Designed to meet the need for an air diffuser and light fixture in the same spot in the ceiling, the KNO-DRAFT DIFFUSER has been announced by the W. B. CONNOR ENGINEERING CORP'N, of New York City.

Retains all functional features of pendant lighting and can be incorporated with any size diffuser, with or without air volume damper. Assembly details and dimensions are contained in Bulletin K-23, 114 East 32nd Street, New York 16.

PRESS BOX IMPROVEMENTS

The Sacramento Board of Education is making a bid for favorable press reports on athletic games played at the Sacramento Junior College stadium by installing some $40,000 worth of improvements to the press box there.

Harry J. Devine, Sacramento, is the architect.

BIDS REJECTED

Bids for painting and waterproofing the Petrero Trolley Coach house, San Francisco, in the amount of $43,441 have been rejected by the Public Utilities Commission of the City and County of San Francisco.

MONTEREY PARK RESERVOIR

Excavation work has started for a million gallon concrete reservoir for the City of Monterey Park, California, which will serve the city with an eighteen inch transmission line.

Quinton Engineers, Ltd., Los Angeles, are the engineers.

NEW WAREHOUSE AND OFFICE

Lucky Stores, Inc. of Oakland, have started construction of a new warehouse and office building in San Leandro. Cost of the reinforced concrete and steel building will be $1,500,000, and will represent 175,000 sq. ft.

J. Lloyd Conrich, San Francisco, is the architect.

Scott Company

HEATING • PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164

Thomas B. Hunter

DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Brownskin
VAPORSEAL
The resilient building paper creped to
S-T-R-E-T-C-H
Quality Products Since 1895
ANGIER PACIFIC CORPORATION
55 NEW MONTGOMERY ST. SAN FRANCISCO 5, CALIF.
7424 SUNSET BOULEVARD LOS ANGELES 46, CALIF.
A complete line of Angier products available from your building material dealer

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard
Interior Trim — Gutters
Special Moldings

The place to SAVE
is
LUMBER MANUFACTURING CO.

225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

Index to Advertisers

ANGIER Pacific Corporation. 48
ARCHITECTS Reports ... 40

BAXTER & Company, J. H. 36
BURKE, W. J. & Co. *

CLARK, N. & Sons. *
CLASSIFIED Advertising 43
CENTER Stationery 48
CLINTON Construction Company 38
CONTINENTAL Water Heater Co. *

DETROIT Steel Products Company 5
DINWIDDIE Construction Company 47
DUFFY Tile Company. 48

FIREBRICK Construction Co., J. N. J. *
FORDERER Cornice Works. 40
FULLER, W. P. Company *

GLADDING, McBean & Company. Inside Front Cover
GUNN, Carle & Company. 46

HANKS, Inc., Abbott A. 48
HAWS Drinking Faucet Company. 31
HERRICK Iron Works. 47
HOGAN Lumber Company. 38
HUNT, Robert W., Company. 48
HUNTER, Thos. B. 47

JOHNSON, S. T. Company *
JUDSON, Pacific-Murphy Corp. 40

KRAFTILE Company 30

LUMBER Manufacturing Company. 48

MARBLE Institute of America *
MATTOCK, A. F. Company. 48
MICHEL & Pfeffer Iron Works. Inside Back Cover
MILLER Company, The. *
MULLEN Mfg. Company. 47
NORTHERN California Electric Bureau. 35

PACIFIC Clay Products Company *
PACIFIC Coast Gas Association *
PACIFIC Manufacturing Company. 39
PACIFIC Portland Cement Company Back Cover
PACIFIC Telephone & Telegraph Co. 45
PITTSBURGH Testing Laboratory 48
POOR Richard Engraving Company. 47

REMILLARD-Dandini Company 48
REPUBLIC Steel Corporation. 39

SCOTT Company 47
SECURITY Valve Company. *
SIDEWALL Lumber Company. 38
SIMONDS Machinery Company 39
SISALKRAFT Company 38
SMOOT-Holman Company 37
SOULE Steel Company 32
STANLEY Works, The *
STOLTE, Inc. 46
SWINERTON & Walberg Company. 47
SONO-THERM Company, Inc. 33

TAYLOR Company, Halsey W. 33
TORMEY Company, The. 47

U. S. Bonds. 1

VERMONT Marble Company 39

WESIX Company *
WESTERN Asbestos Company. *
WOOD, E. K. Lumber Company. 36

*Indicates Alternate Months

TILE CONTRACTORS

Shower Doors, Tub Enclosures
Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

253 Minna St., S. F. YUkon 6-1489

DUFFY TILE CO.

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company

ENGINEERS

Inspection · Tests · Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles · All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago · New York · Pittsburgh

REMILLARD-DANDINI Co

Brick and Masonry Products

★

400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

ARCHITECT AND ENGINEER

TELEPHONE TOLL CENTER BUILDING • Oakland, Ca

PUBLIC LIBRARY
SEP 20
PERIODICAL

PACIFIC TELEPHONE & TELEGRAPH COMPANY

SEPTEMBER 1949

Another New ALL-GAS HOME *for "Smart Young Living"*

Built at the request of readers of a national service magazine, this smart, new model home in Palos Verdes, Calif., features a gleaming New Freedom Gas Kitchen.

Young families all over America were asked what they wanted in a home. Kenneth Acker, A. I. A., Los Angeles, designed just what they specified . . . *an all-gas home.* Here is more evidence of young America's preference for automatic gas *cooking* and *water heating;* for exclusive, silent gas *refrigeration;* and for clean, economical gas *house heating.*

You meet client requirements for modern style, convenience and economy, when you recommend . . .

GAS

PACIFIC COAST GAS ASSOCIATION

• ARCHITECT AND ENGINEER

Vol. 178 No. 3

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS, A.I.A.
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

General night view of the new $15,500,000 "East Bay Franklin Building" of the Pacific Tel. & Tel. Company in Oakland, California, showing construction work in progress during the night shift. See story on Page 14.

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for SEPTEMBER

EDITORIAL NOTES 1

NEWS & COMMENT ON ART 1

HILLTOP HOUSE, Near Lafayette, California 1
For Mr. & Mrs. William F. Phillips—Herbert T. Johnson, Architect

NEW $15.500,000 TELEPHONE TOLL CENTER BUILDING, Oakland, California 1
By Wheeler F. Schall, The Pacific Tel. & Tel. Co.

A. I. A. ACTIVITIES 2

WITH THE ENGINEERS 3

BOOK REVIEWS and Pamphlets 3

PRODUCER'S COUNCIL PAGE 3
Edited by J. Wilson Peele

HEADLINE NEWS & VIEWS 3
By E. H. W.

IN THE NEWS 37, 38, 39, 40, 46, 4

ESTIMATOR'S GUIDE, Building and Construction Materials 4

BUILDING TRADES WAGE SCALES, Northern, Central & Southern California . 4

CLASSIFIED ADVERTISING 4

CONSTRUCTION CONTRACTS AWARDED, General Data 4

ADVERTISERS INDEX 4

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Weatworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office. Vernon S. Yollop, Manager. Telephone DOuglas 2-8311.

. EDITORIAL NOTES .

BENEFICIAL HOME BUILDING

Into a new home go the products and services of many hundreds of businesses and industries.

The home is the final sales target for thousands of manufacturing concerns either directly, through the distribution of equipment, materials and appliances or indirectly through the supplying and servicing of the companies which sell the home builder and the home buyer.

With a large and steady stream of new construction there are far more customers for all products of industry. The nation's lumber dealers, steel manufacturers, cement manufacturers, and all building supply manufacturers sell millions of dollars more volume. The transportation industry does more business bringing goods from manufacturing and processing points to the supply houses, and the companies which work the mines, and harvest the timber of the forest increase their operations.

All along the line from the developer, manufacturer, builder, and consumer, employees get more compensation and steady employment.

Home ownership is, therefore, a good basis for a sound and desired national economy.

* * *

The annual convention of the California Council of the American Institute of Architects has been scheduled for November 7 to 9, inclusive, at Palm Springs, with preliminary convention indications pointing to one of the best and most important state-wide conference of architects ever to be held in California.

Numerous persons nationally prominent in the construction industry, as well as the architectural profession, will deliver papers of more than passing interest.

GIVE ENOUGH for all RED FEATHER SERVICES

THERE was a time in America when a man with a family could take most things for granted. Things like Peace, a Home to live in, an Unbroken family circle, Money in the bank. With his mind and hands he made the Security of the present. Out of his faith in the future he fashioned his dream for his children, his children's children. That they could be born with the right of life, liberty and the pursuit of happiness.

That was the heritage of the American family.

Today that heritage of the American family is in danger. Not from anything so simple as the atomic bomb. The enemies of the American family are subtile, and as complex as the era in which we live. Selfishness, cynicism, ignorance, inertia, breed the dark, death-bringing forces of divorce, delinquency and crime.

Why are these things happening? Have we shirked our responsibilities? Have we taken too much for granted? Have we taken for granted the fact that someone will pick up the pieces of broken homes and families and put them back together? Have we pretended it was not our responsibility?

But, it Is our responsibility, as whatever affects the American family affects us all. As a proven preventative of calamities, and a provider of financial aid, hospital care, and innumerable services during the emergency and disaster on a community and area level, the RED FEATHER services in cooperation with your Community Chest deserves your unqualified support.

Fenestra doors take punishment

without

Looking Wounded

School doors *have* to be tough. They get kicked. And carved. And slammed. Fenestra* Stock Hollow Metal Doors can't splinter. Can't be carved. A little paint makes them look like new.

Complete Unit—Door, Frame, Hardware

They come complete with frames and hardware. Mortising, drilling, tapping and prime-painting are *all* done at the factory. They are packed with insulation for quiet performance . . . to close with a gentle click. And each unit is carefully wrapped to protect the finish.

You Save 3 Ways

You save on first cost, installation cost, maintenance cost. And Fenestra Metal Doors are immediately available. Deliveries from local stocks are timed to reach the job when you're ready for them. No nerve-wracking delay in your builder's schedule. No unnecessary expense *there,* either.

To get strong, fine-quality doors that look better, longer—specify Fenestra.

For complete data on stock sizes, muntin and panel variations, entrance doors, doors with the Underwriters' B Label, and other types, see Sweet's Architectural File, Section 15a/7, or write to Detroit Steel Products Company, Dept. AE-9-2262 63rd St., Emeryville, Oakland 8, Cal.

*Trademark

Fenestra STOCK HOLLOW METAL SWING AND SLIDE DOORS

Unique ARISTON steel froming permits fast, economical erectian.

steel drive in

Well-fitted, smooth walls of sheet metal and steel need anly paint to finish.

Flexibility of design, a neat, pleasing appearance and low maintenance costs are important features.

ARISTON
Metal Products
SINCE 1912

Michel & Pfeffer Iron Works, Inc.

W. A. JAMES, Manager Steel Building Division
Tenth and Harrison Streets, San Francisco 3
Telephone: MArket 1-5966

NEWS AND COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., director of the California Palace of the Legion of Honor, Lincoln Park, in San Francisco, has announced the following schedule of exhibitions and special events for the month of September:

EXHIBITIONS: Masterpieces of the 18th century lent by museums of France in commemoration of the legion's 25th anniversary; American Rooms in Miniature, by Mrs. James Ward Thorne; Jewelry, by Milton Cavagnaro; Drawings, by Alexander Archipenko; Sculptures, by Robert Furrer; and French Silver and other examples of European decorative arts from the Catherine D. Wentworth collection.

EDUCATIONAL ACTIVITIES: Recreational painting classes for children, ages 8 to 12, each Tuesday and Thursday at 10:30 a.m. with instruction by Colin Graham. Gallery tours, organ recital each Saturday and Sunday at 3:00 p.m. by Uda Waldrop; and free motion pictures each Saturday at 2:30 p.m.

CALIFORNIA SCHOOL OF FINE ARTS

The California School of Fine Arts, 800 Chestnut Street, San Francisco, opened its 18-week fall semester on September 12.

The school's three departments — painting, sculpture, graphic arts; design for commerce and industry; and photography—will offer a variety of intensive courses in both the day and evening classes. Subjects included are basic drawing, color, figure composition, precision drawing, ceramics, jewelry design, illustration, print-making, advertising art, lettering, design workshop, textile design and movie-making.

Saturday mornings will be devoted to special classes for junior and senior high school students in pre-professional training. Painting, sculpture and design fundamentals will be taught during the hours of 9:00 a.m. to 12:00 noon.

Two new courses keyed primarily to the interests of high school teachers have been introduced in the night school. They are design in materials, a course in workshop methods, and films for education, a class in motion picture production techniques.

CITY OF PARIS

The City of Paris, San Francisco, has scheduled the following exhibits and activities for the month of September:

An exhibition of modern French masters including paintings by twenty-five distinguished artists, including Marc Chagall, Andre Derain, Raoul Dufy, Renoir, Georges Rouault, Maurice Utrille, and Maurice de Vlaminck. The pictures of the month will include a group of drawings by French artists of distinction.

PORTLAND ART MUSEUM

The annual meeting of the Museum has been set for October 10th. Five Trusteeships expire and will be filled this year.

* * *

M. Charles Sterling, Curator of Painting of the Louvre, who is visiting this country in connection with an exhibition of paintings celebrating the Twenty-fifth Anniversary of the California Palace of the Legion of Honor, gave a lecture on September 21st entitled, "Elegance in 18th Century French Painting", illustrated with slides.

* * *

A series of Wednesday evening programs is being arranged by Mrs. Lois Diehm, Museum Docent.

* * *

An exhibition of Ceramics by Marguerite and Franz Wildenhain of Pond Farm has been arranged. The exhibition will include some 80 pieces of Wildenhain "Pond Farm" ware,, selected to show the scope of their work, characterized by subtlety of shape and color.

Other exhibits scheduled are Mural-Scrolls issued by Katzenbach and Warren, Inc., published in limited editions, and on canvas via the silk screen process. Four scrolls to be shown are: "A Piece of My Workshop", by Alexander Calder, American famed for mobile sculpture; "Arbre en Fleur" by the French painter Henri Matisse; "Sun Dice" by Matta, and "El Sol" by Joan Miro.

* * *

Drawings and painting by children in the Arts and Crafts department of the U. S. Indian School in Santa Fe, New Mexico, will be shown in the Young Peoples Gallery to October 9th.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building at the Civic Center, will present the following exhibits and activities during the month of September:

EXHIBITIONS: Domestic Architecture of the San Francisco Bay Region; the James D. Phelan Awards Competition; Folk Arts of the Far East; International Children's Art Exhibition; Contemporary Japanese Decorative Arts; Photographs by

Julia Margaret Cameron; New Works by Bay Region Artists; Paintings by Bezale Schatz; Polish Manual Arts; and Paintings by Harry Baker, Karl Baumann, and Victor De Wilde.

ACTIVITIES will include the Famous Film Series each Tuesday evening at 8 o'clock; a special lecture on Fabrics by Delcina Bair and Helen Van Cleave Park on Wednesday afternoons, and Childrens Saturday morning art classes.

M. H. DE YOUNG MEMORIAL MUSEUM

Walter Heil, director of the M. H. de Young Memorial Museum in Golden Gate Park, San Francisco, has announced the following exhibitions and events at the Museum for the Month of September:

EXHIBITIONS: Thirty Paintings by Stuart Davis, Yasuo Kuniyoshi, and Franklin Watkins; Contemporary Japanese Color Woodcuts, lent by Wm. C. Hartnett; Paintings by Lyla Harcoff, and Paintings by Helen Farr.

• • •

THIRTY PAINTINGS: Donald Bear, Director of the Santa Barbara Museum of Art, who planned and assembled this show, which has just concluded its Santa Barbara showing, and will go to Portland from San Francisco, says of this collection: ". . . the most important painting exhibition of the year, a show presenting ten well-known and representative paintings each by three of America's foremost artists, namely STUART DAVIS, YASUO KUNOYOSHI and FRANKLIN WATKINS. Private collections and museums from all over the United States have contributed to the exhibition . . . The exhibition is originated and organized by the Santa Barbara Museum for this special Western circuit and is considered by a number of outside authorities to be one of the most interesting of the entire year. Twenty-two well known museums and collectors are represented in the show.

"It would be difficult indeed to name three artists whose work is more widely discussed in America than Yasuo Kuniyoshi, Stuart Davis and Franklin Watkins. It also would be difficult to find three painters whose work is less alike than theirs. Each is strikingly individual and each has made a major contribution to the work of our own time. Stuart Dais has brought concise, disciplined measurement and evaluation of American life into the realm of abstract painting. Yasuo Kunivoshi has brought to the art of our country a new air of cosmopolitanism, sustained by a wit of personal observation that is quite unlike the statements of any of his contemporaries. In the painting of Franklin Watkins we find an intense and rare quality of inner vision combined with a high degree of true sophistication. One of his rarest gifts is the ability to find the drama in any given pictorial situation through which he creates a feeling-mood that lifts the subject matter far above our usual dull seeing."

MASTERPIECES FROM THE MUSEUMS OF FRANCE TO BE SHOWN IN SAN FRANCISCO DURING FALL MONTHS

The Louvre and eighteen other museums of France are sending to San Francisco a priceless collection of 60 masterpieces of 18th Century French art to commemorate the twenty-fifth anniversary of the California Palace of the Legion of Honor. This great loan exhibition, the most comprehensive of its kind ever assembled, opened at the California Palace of the Legion of Honor on September 16 to continue through November 11, the actual date of the Museum's dedication in 1924 as a memorial to the California heroes wko lost their lives in World War I.

His Excellency Mr. David K. E. Bruce, United States Ambassador to France, His Excellency Mr. Henri Bonnet, French Ambassador to the United States, and Mr. Jean de Lagarde, Consul General of France, head the Honorary Committee for the exhibition of masterpieces.

The French government is making this gesture of unparalleled generosity in recognition of the founding of the Museum, which is a replica of one of the most historic buildings in Paris, the Palais de la Legion d'Honneur. The Museum was presented to the City of San Francisco in 1924 by Mr. and Mrs. Adolph B. Spreckels.

In addition to the Louvre and the Musees Nationaux, the impressive list of lenders includes the museums of Amiens, Angers, Besancon, the Carnavalet, Compiegne, La Fere, Le Harve, Lyon, Nantes, Orleans, Reims, Rouen, Saint-Omer, Strasbourg, Tours, Valenciennes, and Versailles.

Among the renowned artists represented will be Boucher, Chardin, Fragonard, Greuze, Hubert Robert, Lancret, Nattier, Mme Vigee-Lebrun, Watteau, and numerous other masters of the 18th century. The show will include 35 paintings and 25 drawings. Loans from the Louvre and National Museums of France include Chardin's famous, "Young Man with a Violin", Fragonard's "Blind Man's Bluff," and Watteau's exquisite "Le faux-pas." A special feature of the exhibition will be four tapestries from the Royal Chateau of Compiegne; these are the celebrated set "The Hunts of Louis XV," designed for the King by Oudry between 1734 and 1745.

HILLTOP HOUSE

Near Lafayette, California

FOR

MR. & MRS. WILLIAM F. PHILLIPS

HERBERT T. JOHNSON, *Architect*
WILLIAM H. ANDERSON, *Contractor*

On the top of a hill overlooking the town of Lafayette, in California, this small house was designed by Architect Herbert T. Johnson of Oakland, to provide a modern home at a minimum cost for a young couple and their two-year-old son.

This was achieved by clean-cut, simple planning and details. Although the rooms are not large, they are adequate. The present area of the three-room house is 675 square feet; and the garage is 240 square feet, which allows ample space for a car, work bench and storage.

There are several possibilities for expansion. Either two bedrooms, or one bedroom and a laundry can be added in the rear; the living room could become a dining room, with a new living room extending across the whole front of the building; or a new living room can be added with the present one becoming a bedroom and closet off an extension of the hall.

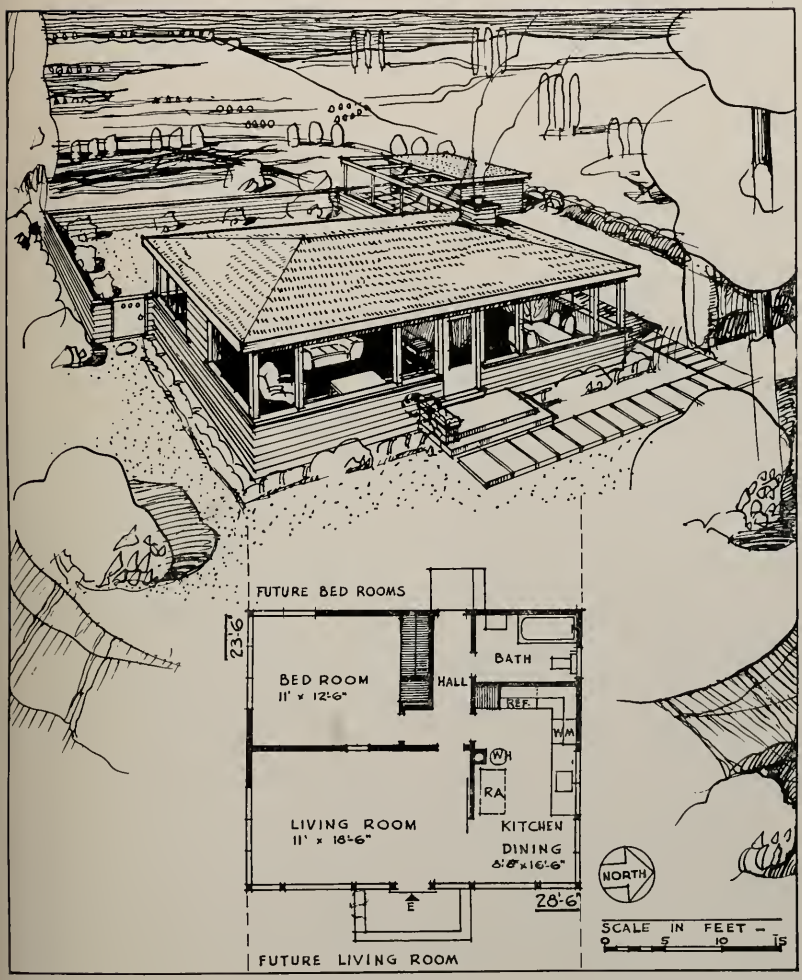
Unusual features incorporated in this house are: a glazed sliding door between the living room and kitchen; cove lighting incorporated in the curtain valance in the living room; and large glazed areas.

Construction conforms to F.H.A. standards and there was no skimping on the quality of materials or workmanship.

The building is wood frame with stained redwood siding exterior. Roof is tar and gravel. Horizontal sliding wood sash are combined with large fixed glass panels. Sash and doors are painted—driftwood finish is used on all interior wood surfaces. Floors are finished pine except for linoleum in the kitchen and bath. Provision was made for an automatic washer in the kitchen. 1x6 let in bracing was used in the interior as well as exterior walls for earthquake stresses.

APPROXIMATE TOTAL COST OF CONSTRUCTION **$6,100**

Based upon 1948 construction costs, the House itself was $5,400, while the Garage represents an additional $700. This cost does not include excavation, Roadway, Garden Work, or Architect's fee.



BRITISH BUILDERS LAUD EFFICIENCY OF CONSTRUCTION INDUSTRY

Speed of construction, mechanization and labor-saving equipment; efficiency in coordinating the work at the job-site, labor productivity and central heating and frame siding for small homes were among the outstanding attributes of the American building industry which impressed the 17-man British Building Team which recently concluded a six weeks study of U. S. construction techniques.

Robert Owen Lloyd, president of Lloyd's & Cross, contractors of Birkenhead, England, and leader of the British Team, in a statement to the Building Trades Employers' Association of New York City, said:

"We were more than surprised at the speed with which the American building industry is producing homes. We were also intrigued with the design and general construction. Most of the homes we saw have framed walls and basements. This is almost unknown in Britain. We are also glad to see that every home is provided with its own heating plant. This we consider essential to give maximum comfort. I, personally, would like to see this included in every British home; primarily because our system of open fireplaces is wasteful of fuel and creates extra work for the housewife."

He also pointed out the British builders do not provide "anything like the equipment we found in American homes, primarily because some of this equipment is too expensive in Britain."

Commenting on labor productivity observed in the United States, he said, "your workmen are doing a first class job in every way, and the way your industry is turning out buildings, from small homes to tremendous skyscrapers, calls for our admiration."

Speaking of skyscrapers, he emphasized that Britain had few buildings over ten stories, but "I must say your New York City skyline is most impressive. We were amazed at your speed of construction and coordination of work at the job-site. It is remarkable how your builders can erect such tall buildings on such a small site right in the center of your most congested traffic areas with no disruption of traffic or inconvenience to pedestrians. It is a tribute to the skill and efficiency of your building contractors. You Americans should be proud of the job they are doing.

"Your contractors affiliated with the Building Trades Employers' Association and other groups have been most generous in exchanging ideas with us which will be helpful to our industry in England. After visiting six major cities, we were especially impressed with the fine labor relations existing in New York under the leadership of Peter W. Eller, chairman of the Building Trades Employers. It is expressed in your wage stabilization agreement and the sharp increase in labor proficiency, which I understand has resulted in many production records being set on Skyscraper buildings now under construction."

In a preliminary report to the Economic Cooperation Administration, joint sponsors of the British tour with the Anglo-American Council as a means of stepping up of production in Britain, Mr. Lloyd said the Team was particularly interested in the widespread use of framing for side walls of homes. In England the vast majority of homes are constructed of brick. "We are convinced," he said, "that framing of walls adds to rapid construction and offers easy fixing for interior finishes, and at the same time gives easy fixing for any type of insulation. Whether the homes are finished with a brick veneer, asbestos or cedar shingles, the walls have stood the test of time. Another improvement is the provision for basements which make pos-

sible economical forms of mechanical services, the like of which we do not have in the United Kingdom.

"These two important items together with the asphalt shingle roof covering, will excite our minds and will find a place in our report." Mr. Lloyd explained that most roofs in England are slate or tile and that he was impressed with the long-life, and ease of application of asphalt shingles. According to the Department of Commerce, more than 80 per cent of all roofing material used in the United States is asphalt.

Discussing commercial building, Mr. Lloyd asserted: "We were intrigued with the methods of building the outside walls with a brick veneer and cinder block interior (backing). This gave rapid construction carrying a low labor content and these buildings were erected quickly and cheaply.

"An adequate supply of materials and flexibility of design enables the private enterprise house builder to provide economically-priced housing for the middle income group. The average building trade craftsman here can afford to buy his own home. This is a fundamental factor in giving the incentive which is necessary for good production."

Praising the American system of competitive free enterprise, Mr. Lloyd said: "One of the most important aspects of our tour has been to find out the reasons for the relatively high degree of productivity which exists here, not only among the labor force but among architects, contractors and sub-contractors alike. We have come to the conclusion that this is based on the high degree of incentive which exists here in every walk of life. There is keen competition among contractors for work, keen competition in the buying of materials, and keen competition among the labor force to retain their jobs in order that they may keep up their standard of living."

SIMPLIFIED PRACTICE RECOMMENDATIONS

Recent recommendations of the United States Department of Commerce, National Bureau of Standards, which apply to the construction industry include the following subjects:

R144-45 Paints. Varnishes, and Related Products (Colors and Containers) proposed by the Simplification Committee of the National Paint, Varnish and Lacquer Association, has been submitted to producers, distributors, users, and others interested for acceptance and comment. Lists a variety of oil paints, enamels, varnishes, water-thinned paints and related products, and gives maximum number of colors and sizes of containers for each kind of material.

R29-49 Eaves Trough, Conductor Pipe, and Fittings consists of simplified list of types and sizes of eaves trough, conductor pipe, and fittings made of galvanized sheet steel, copper, aluminum and stainless steel. Minimum weight and thickness of fabricating materials is also given.

CS117-44 Mineral Wool: Blankets, Blocks, Insulating Cement, and Pipe Insulation for Heated Industrial Equipment, has been submitted to manufacturers and other interested groups for consideration and approval. Recommended changes approved by the Industrial Mineral Wool Institute includes requirements for loose, Granulated and felted forms of mineral wool, together with nine new illustrations and two revised illustrations showing methods of fastening and application of the mineral wool insulation to various types of heated surfaces.

SC45-48 Commercial Standard for Douglas Fir Plywood, covers four basic grades of veneer: "A", "B", "C", and "D". The new grades have been introduced in both the Interior and Exterior types.

R217-46 Copper Water Tube and Copper and Brass Pipe revision lists three additional sizes of type M tube for use in waste, soil, and vent lines and ¼-inch type L tube. A 12-ft. straight length of tube has been added.

Complete information on these Standards may be obtained from Government Printing Office, Washington, D. C.

UNIVERSITY OF SAN FRANCISCO GLEESON MEMORIAL LIBRARY

The University of San Francisco's $1,300,000 Richard A. Gleeson Memorial Library will be built by Barrett & Hilp, Contractors, according to a recent announcement by the Very Reverend William J. Dunne, president of the University.

Construction was started during July and will be completed in about a year.

The building marks the inauguration of a series of improvements to the University which when completed will represent an expenditure of more than $12,500,000. The building will be four stories high, plus basement, and will incorporate many new ideas in architectural concrete work and utility library building use.

DRIVE IN THEATRE. Stockton, California, will have a new $125,000 drive in theatre, to be built by the Nomellini Construction Company of Stockton.

EAST BAY FRANKLIN BUILDING
PACIFIC TEL. & TEL. COMPANY

New $15,500,000 TELEPHONE TOLL CENTER BUILDING

Oakland, California

By WHEELER F. SCHALL
The Pacific Telephone & Telegraph Company

One of the largest commercial structures on the Pacific Coast to be completed since the war was built by The Pacific Telephone and Telegraph Company in Oakland to house equipment for a new toll switching system called No. 4 crossbar, developed by the Bell Telephone Laboratories.

The 15-story building project was started in March, 1947 and completed in July, 1949. The equipment, which represents a major advance in long distance telephony, will be placed in operation in October. The cost of the overall project was $15,500,000.

The new No. 4 crossbar toll switching system makes it possible to introduce, on a wide scale, direct dialing by operators of long distance calls between many points on the Pacific Coast and other parts of the country. Operators will "push-button" the calls to the distant called telephone without the assistance of sister operators at intermediate points.

Initially, 29 Pacific Coast points and 14 other cities in other parts of the nation will be directly connected to the Oakland toll center building. Matching equipment has been installed in all of these cities to permit handling of long distance traffic through the Oakland toll center.

In addition to the points directly connected with the Oakland system, calls can be handled on a dial basis to many tributaries of these cities and to a large number of additional points connected to Chicago, Cleveland, New York, and Philadelphia where No. 4 crossbar systems are in operation.

The new system is part of an overall plan to extend direct dialing of long distance calls by operators on a nation-wide basis. As more No. 4 systems are installed and placed in service, nation-wide toll dialing will become a reality on a progressive basis.

Extensive planning and coordination was required, in order that the many phases of the overall project could be completed in their proper sequence. Not the least in importance in this respect were the engineering studies required to design a building to carry the tremendous weight of the heavy equipment to be installed. The building was constructed with a structural steel frame, reinforced concrete floors and reinforced concrete walls. All of the vertical loads are carried on the steel frame.

As this building is located in an area where earthquakes may occur, extra heavy framing has

been provided to care for this factor.

The building is primarily designed to meet the usual telephone needs of the area it serves and as a result all 15 floors are designed to handle telephone equipment. Because of the requirement for floor loading and equipment heights which are over twice those required for the average commercial structure, typical floors were eningeered for loads of 150 lbs. per sq. ft. and approximately 18 ft. floor to floor heights. On the 8th floor which contains the heavy equipment required to furnish telephone power the floor slab design contemplates loads up to 800 lbs. per sq. ft.

The entire structure was riveted to resist vertical loads while the half I-beam sections connected to the top flanges of the floor girders were attached to the columns by means of high strength bolts. These provisions assured positive inspection of the steel frame and provide positive resistance in case of earthquake or windstorms.

The exterior spandrel trusses constructed of structural steel were attached to the outside flanges of the columns which yielded at least one more additional foot of useful space in the building, as compared to other systems of framing whereby similar girders are located at the center line of the columns. The top and bottom chords of these spandrel trusses were constructed of two channels. They were made continuous along the perimeter of the building and were an integral part of the concrete walls.

Near one exterior wall a large concentration of walls around shafts, stairways and flues as well as fire walls give rise to heavy loadings along one side of the building, while only nominal loads are carried by the remainder of the foundation. As the heavier loads occur along a property line the designers were given the problem of providing a foundation on which this unbalanced loading would not produce uneven settlement of the building.

The importance attached to uniform settlement, even on a long-term basis, was increased by the fact that the new building would be 288 ft. high; a lever arm that would amplify unequal settlement. The foundation area is 139x144 ft., and the

TELEPHONE TOLL CENTER BUILDING—Oakland

The following firms, participants in the construction of the "East Bay Franklin Building" of the Pacific Tel. & Tel. Co., have display advertisemens in this issue:

Architect: Harry A. Thomsen & Aleck L. Wilson.
Structural Engineer: John J. Gould.
Mechanical Engineer: Harry S. Haley.
Electrical Engineer: Lyle E. Patton.
Foundation Engineers: Dames & Moore.
General Contractors: Dinwiddie Construction Co.
Electrical Equipment: Matson Electrical Equipment Co.
Construction Towers & Scaffolds: Steelform Contracting Co.
Plastering, Furring & Lathing: Patrick J. Ruane, Inc.
Excavating: Ariss Knapp Co.
Masonry Erection: J. T. McGreevy & Co.
Electric Water Heaters: Haws Drinking Faucet Co.
Painting: J. H. Mohr, Inc.
Plumbing, Heating, Air Conditioning: Scott Company.

General view of the building showing completed structural steel in place, and concrete operations in process.
Moulin, Photo

Hoisting the first steel column into place.

Albert Harris, Photo

heavy loads, ranging from 15,000 to 18,300 psf., occur in one corner of the building in an area of 28x126 ft. Over the remainder of the foundation the loads range up to 9,000 psf. with an average of 6,000 psf. All these loadings are total dead load plus 60 per cent of live load.

In considering the type of foundation best suited to the concentrated loads, three kinds of supports were considered, namely, precast concrete piles, large concrete cylinders of the caisson type and steel tubes to be driven with open bottoms and later emptied so they could be filled with concrete.

In comparing and contrasting these three methods, the precast concrete piles were eliminated first, because of the possibility that their driving

Delivery of the first steel column — stopped traffic. *Albert Harris, Photo*

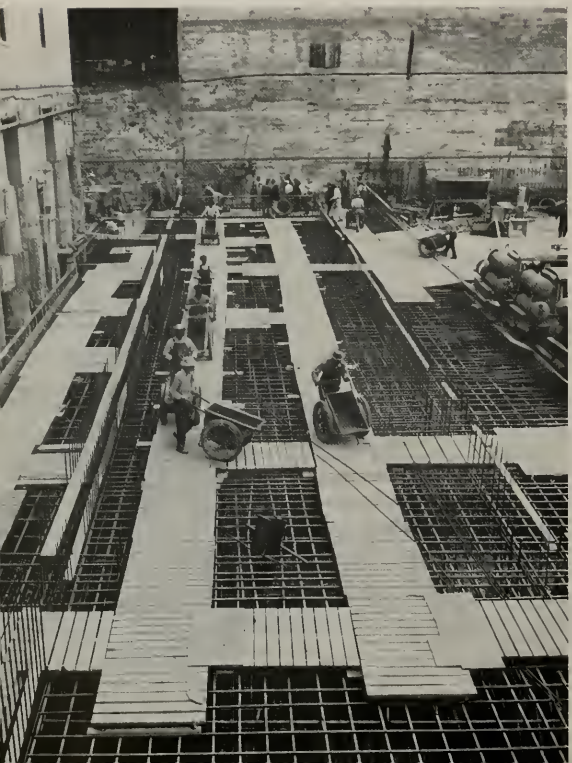
on close spacing and with the aid of jets might disturb the foundation balance temporarily, with an unknown effect on amount of ultimate settlement.

The next type to be abandoned was the large concrete caissons. These would concentrate loadings to a higher total than was desirable where no rock bottom could be reached and would be relatively costly where groundwater level is high. Finally, test borings indicated that frictional resistance would be the principal factor in supporting the load.

Under these conditions and when it appeared that the maximum friction would be developed by the steel tubes because they would present a greater total area in contact with the soil than would the relatively small number of larger cylinders, the steel tubes were given preference.

The steel tubes had the great advantage that they could be driven with practically no disturbance to adjoining soil pressures because of the extremely small displacement involved in putting down an open cylinder with walls only ⅜ in. thick. Thus the tubes could be driven on a close spacing and yet, after being poured full of concrete with suitable steel reinforcing, could carry a heavier loading than precast concrete piles of corresponding size and length.

Examination of the test boring logs showed a stratum of dense sand with a suitable bearing value at a depth of 80 ft. below the surface. Laboratory tests on intervening materials indicated that frictional resistance would be such that the total permissible load on 18-in. steel tubes put down to this depth would be about 100 tons per tube. This bearing value is sufficient for the most



Pouring concrete mat reinforced with steel rods, for foundation.

Over 7,000 cu. yards of concrete were used in the foundation alone.

Albert Harris, Photo

heavily loaded area with tubes in a staggered plan, 3½ ft. apart in one direction and 3 ft. 1 in. in the other. This spacing gave a net clearance of 2 ft. between the edges of adjacent steel cylinders. A total of 246 tubes from 48 to 60 feet long were used for the job.

At the outset an ordinary steam hammer was used for driving, but because of the extremely tight formation in the compacted material a special single-acting No. 0 Vulcan hammer using a 10,000 lb. ram on a 3½ ft. fall was brought on the job. This gave very satisfactory results on long-continued heavy duty, and the driving rate was at almost twice that of the lighter rig. Despite the close spacing, the tubes went down without any interference whatever with those previously driven. Moreover, because of the uniformity of the foundation material they went down straight with negligible deviation from the vertical.

For two reasons care was taken to drive all of the tubes to exactly the same depth below the surface. First, with this penetration the stratum of high-resistance foundation material would be reached throughout the heavily loaded area and, second, by having all the tubes terminate in the same formation they would all develop the same bearing value and equal settlement could be expected. Calculations of expected total settlement in a 20-year period predict a difference of only ½ in. between amount of settlement of the tubes and the 5-ft. slab.

Although nothing beyond the usual practice of

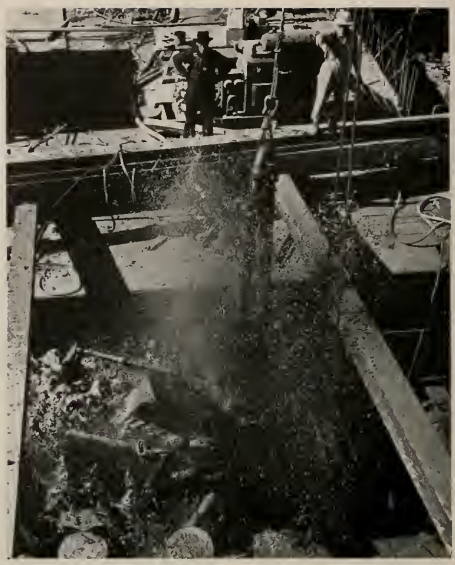
Rigging Concrete Hopper preparatory to pouring the 15th floor.

Albert Harris, Photo

RIGHT

Blowing out steel caissons with air and water jets prior to setting reinforcing steel and pouring concrete.

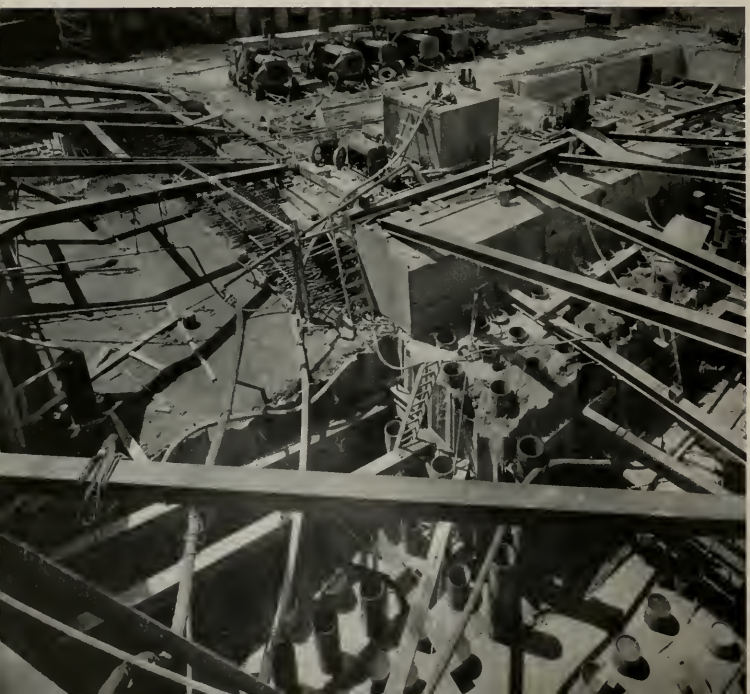
Albert Harris, Photo



BELOW

Close-up of foundation operations showing the steel caissons in place, foundation slab and shoring.

Moulin, Photo



lowering a pipe into the tubes through which an air and water jet could be admitted was involved in cleaning the tubes, more forethought and arrangement of equipment was required to restrain and catch the ejected material. The plan adopted was to use a bonnet or deflector put over the top of the tube where it would deflect the spouting of the stream into a skip alongside. The jet pipe went down through a hole in the bonnet.

Despite the fact that most of the water and a good deal of the solid material overflowed, the 5-cu. yd. skip retained enough to be practicable. Overflow material was later hand-shoveled into the skip as close spacing of the piles made it impossible to use equipment efficiently.

Jet water used in emptying the tubes was re-circulated from the sump in the lot, and the water reused as much as possible. However, a mud slurry kept accumulating which was too heavy to pump and too liquid to shovel. A mud pump was set up to lift this slurry out of the site. Danger of clogging sewers made it inadvisable to dump this slurry into gutters, and it was decided to haul it away in tank trucks.

Groundwater level at this building site occurs at a depth of about 28 ft. below the surface. In cleaning out contents of the tubes it was desired to leave enough material at the lower end to serve as a seal preventing inflow of groundwater. Hence, in removing tube contents the work was stopped some 3 ft. above the bottom.

Compacting material remaining in the bottom of the tube, preliminary to placing concrete, was effected by a 20-ft. length of 8-in. H-beam to the lower end of which a 16-in. circular plate had been welded. This H-beam, lowered by a crane line, served the dual purpose of cleaning off anything adhering to the inner face of the tubes and tamping the material remaining in the tubes at the bottom. The tamping was done by dropping

ANOTHER MAJOR ELECTRICAL JOB BY MATSON

Boiler Room Control Switchboard

Main Switchboard

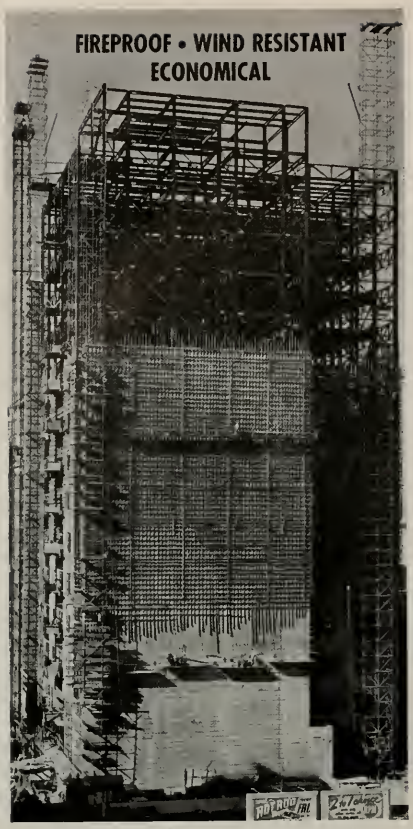
MATSON again is out in front with a notable electrical installation . . . this time it's the 12 million dollar 15 story East Bay Franklin Building, Oakland, for the Pacific Telephone & Telegraph Company . . . pronounced one of the finest structures of its type in the nation.

MATSON is proud to have contributed to the successful fulfillment of this outstanding development. Our contract included complete wiring system with switchboards, panel boards, lighting fixtures, etc.

MATSON ELECTRICAL EQUIPMENT CO.

3781 Broadway • Oakland, Calif.

Phone: HUmboldt 3-1294



East Bay Franklin Building, Oakland, for P. T. & T.

STEELTUBE CONSTRUCTION TOWER
MASON'S SWINGING SCAFFOLDS
including
Concrete Bucket, Hopper, Boom, Cage,
Sheaves, Man-Carrying Elevator

Supplied and Installed By

STEELFORM CONTRACTING COMPANY
666 Harrison Street · San Francisco
833 East Gage Avenue · Los Angeles

the H-beam section repeatedly through a distance of about 20 ft.

Immediately after cleaning out, the tube tops were covered by placing inverted half-barrels over them to prevent debris from falling down inside. As cleaning operations moved out of the way, the half-barrels were removed, the tubes given a final inspection with a light and a mirror, the reinforcing installed (four 1-in. rounds fastened with ⅜ in. ties on 12-in. centers) and concreting was carried out.

Since completion of the concrete work of the building about 1½ years ago a number of elevations have been taken to determine rates of settlement of the entire structure. Up to now all portions of the building have settled about equally.

Part of the preparatory work on the foundation was to provide support for the adjoining bank building and to prevent caving along street and property lines. Accordingly, before excavation began, a line of 10-in., 42-lb. H-beams were driven as piling on 6-ft. centers along the lines where bulkhead support was needed. With these in place, as excavation was carried on, horizontal lagging was tucked in between flanges of the H-beams. In the upper portions the plank lagging thickness was 2 in.; at greater depths, 3 in. The H-pile lengths varied from 30 to 50 ft. and were selected so that each one would extend 8 to 10 ft. below the bottom of the excavation that was to follow. Driving was hard and each pile required up to 3,000 blows of the Vulcan No. 1 hammer.

Walers consisted of doubled 10 or 12-in. H-sections set side by side. Shoring was 10- or 12-in. H-sections or 12x12 timbers, as required. Provision was made for later moving the shores to clear the piledriver when driving the 18-in. tubes. Walers were carried on brackets welded to the steel bulkhead piles. Bulkhead piles were also utilized as partial support for the piledriver in the hole. By capping them at the street level and putting crane mats on the cap, they also helped support the weight of the crawler crane on top. Walers and shores were handled with either the crawler or truck cranes at surface level. Shores were provided with support at the lower end by casting stub H-sections into the concrete slab in the middle of the site where no pipe piles were to be driven.

Pouring the concrete slab in that part of the foundation not to be supported on piles was done as soon as excavation had been completed and before driving the steel tubes. This program had the advantage of providing a working surface from which to handle the deeper foundations. The piledriver that put down the 18-in. tubes start-

General view of foundation operations showing the driving of steel caissons.

ed from the concrete slab and advanced over the deep foundation area on falsework piling driven by a hammer working in hanging leads slung from a crane at ground level.

The first and second exterior walls of the 15-story structure are faced with red granite. Windows for first and second stories are plate glass in stainless steel frames. Entrance doors are tempered glass.

Exterior walls above the second floor are faced with ceramic veneer. Upper windows are double hung, steel frame, glazed with clear wire glass.

Floor coverings consist of linoleum for all working areas of the building. The first floor public office is tiled with rubber. Elevator lobbies, stairs and toilet rooms are terrazzo.

Acoustical ceilings are provided throughout all office areas. Interior doors and trim are of hollow metal construction and office partitions are movable steel.

Total height of the building from sidewalk to top of flag pole is 348 ft. and 8 in., and its weight—approximately 75,000 tons, exclusive of equipment.

Material used in construction consisted, in part, of 7,100 tons of structural steel, 27,000 cubic yards

The Building:

PACIFIC TEL. & TEL. COMPANY

East Bay Franklin

Oakland

The Builders:

DINWIDDIE CONSTRUCTION CO.

Crocker Building

San Francisco

Installation of form work preparatory to pouring concrete on 14th floor.

Dean Stone & Hugo Steccati Photo

of concrete, 1,750 tons of reinforcing steel, 49 tons of aluminum ducts and 37 tons of sheet iron. Floor covering required 200,000 square feet of linoleum. Exterior walls took 145,000 square feet of ceramic terra cotta, and 8,000 square feet of granite.

Four signal control, gearless passenger elevators are provided. Each has a capacity of 3,000 pounds; speed 700 feet per minute. Cabs are of oak, platforms 7.0x5.6 feet. Elevator doors are porcelain enamel.

Heating facilities consist of three low pressure boilers with combination oil and gas burners. These supply steam to the preheating and booster

PLASTERING

FURRING AND LATHING

IN THE 16 STORY EAST BAY FRANKLIN BUILDING FOR PACIFIC TELEPHONE & TELEGRAPH CO.

—:—

by

Patrick J. Ruane, Inc.

Contracting Plasterers

44 San Jose Ave., San Francisco

EXCAVATING

NEW OAKLAND TELEPHONE BUILDING

—by—

ARISS GRADING KNAPP CO. CONTRACTORS

961 Forty-first Street — OAKLAND
Phone: Piedmont 5-0436

heating coils for each floor. Supplementary heat for corridors and outside offices is supplied by radiators from a vacuum steam heating system.

Ventilation is provided by supply fans for each floor and the used air is carried off by exhaust fans on each floor. A separate exhaust system is provided for the kitchen and cafeteria.

Cooling is provided by centrifugal machines complete with chiller and condensers. Condenser water is cooled by use of a cooling tower and the water is circulated by means of pumps. Chilled water is pumped to the various cooling coils on each floor.

Heating, ventilation and cooling systems are automatically controlled by a system using resistant thermometers mounted on a panel in the boiler room.

The plumbing system includes toilet rooms on each floor with a soilpipe system of extra heavy cast iron pipe and fittings. Hot and cold water piping systems of red brass I.P.S. with extra heavy brass fittings are provided, together with wet and dry standpipe systems.

The house tanks in tank room on the roof supply the cold water to plumbing fixtures from the 12th to the 3rd floors. The incoming cold water supplies plumbing fixtures from basement to 2nd floor. Plumbing fixtures on 13th, 14th and 15th floors and cooling towers are supplied from the pressure water system in the tank room on the roof.

The plumbing work includes a gas piping system as required for cooking equipment for the cafeteria.

The building's electrical system is served from three 4,000 amp. 120/208 volt, 3-phase, 4-wire bus feeders brought in from two Pacific Gas and Electric Company transformer vaults under the Franklin Street sidewalk. Each vault contains three 500 K.V.A. network transformers. The service has three 12,000 volt primary feeders into the vaults, with two transformers on each feeder.

MASONRY ERECTION

PACIFIC TELEPHONE & TELEGRAPH BUILDING

OAKLAND, CALIFORNIA

J. T. McGREEVY & CO.

General Brick Construction

122 Hugo Street — San Francisco — Phone: MO 4-0846

D Steet — Wilmington, Calif.

In their new Oakland building...

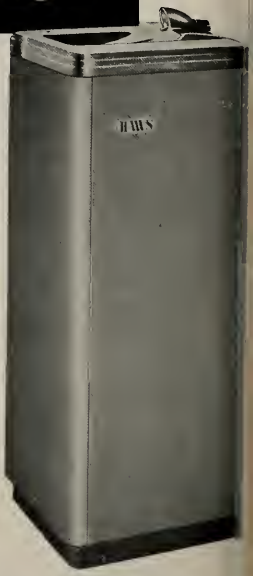
Telephone people work refreshed...

thanks to the company's installation of...

Streamlined for Beauty and Complete Sanitation

HAWS

ELECTRIC WATER COOLERS



Designers of modern office buildings must engineer employee-relations right into the building. Good employee-relations call for planning for both the comfort and efficiency of the worker. Here, HAWS Electric Water Coolers can play an important part, for thirst hastens fatigue . . . but fresh, cooled drinking water prolongs the peak of efficiency.

This fact has been recognized by the designers and owners of the new telephone building in Oakland. You, too, whether architect, engineer or owner, may profit from careful consideration of the value of proper drinking water facilities in your new buildings. HAWS complete line of fountains and coolers insures the availability of the proper facilities. You can depend on highest quality and long trouble-free service, when you specify...

HAWS

ELECTRIC WATER COOLERS
SANITARY DRINKING FOUNTAINS

1435 FOURTH ST. (Since 1909) BERKELEY 10, CALIFORNIA

Agents & Sales Representatives in All Principal Cities

HAWS MODEL No. HT-10

MAIL COUPON TODAY
FOR NEW HAWS CATALOG!

52 PAGES of the complete line of HAWS drinking water facilities and equipment. An essential reference book for anyone specifying such products.

HAWS DRINKING FAUCET CO.
1435 Fourth Street, Berkeley 10, California

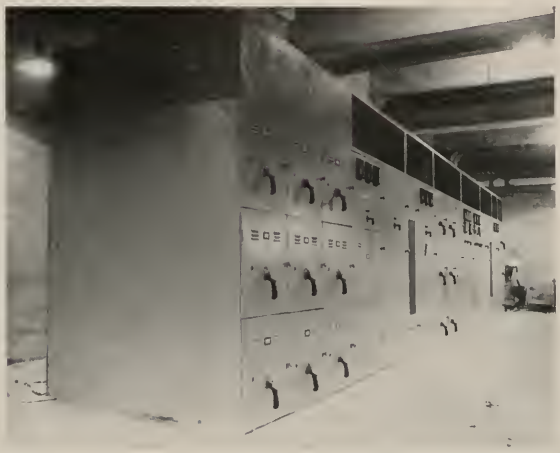
Gentlemen: Please send us a copy of the new '49a HAWS Catal

Firm_____

Address_____

City_____ (zone) State_____

By_____



Main house service switchboard which controls the lighting and power for the building.

Albert Horris, Photo

The main switchboard is approximately 45 feet long. It is a draw-out air circuit breaker switchboard, containing three 4,000 amp. main breakers, two 4,000 amp. bus tie breakers, one 4,000 amp. emergency generator feeder breaker and various sub-feeder breakers.

A 4,000 amp. bus duct connects the switchboard to the emergency diesel-engine-driven generator of 400 K.W. capacity. There will ultimately be three 400 K.W. emergency generators.

Upon failure of the utility's service, the engine generator equipment is started and the load on center section of the main switchboard is automatically transferred to the engine generator equipment. Through tie breakers, any and all loads on the main switchboard can be manually transferred to the engine generator equipment up to the capacity of this equipment. Interlock on main and tie breakers prevent paralleling emergency engine generators with the utility's service.

The approximate connected load served from the switchboard:

Lighting	1,375 K.W.
Power	1,525 H.P.
Telephone power	1,200 K.W.
Clencourt Bldg. (Light and Power)	700 K.W.

Lighting for the first floor public office is provided by 45-foot candle power flush fluorescent fixtures. Other office areas are equipped with suspended lowered fluorescent fixtures—also 45-foot candles.

(See Page 43)

PAINTING

OAKLAND TELEPHONE BUILDING

—by—

J. H. MOHR, INC.

1685 Kansas Street - San Francisco

PLUMBING • HEATING
AIR CONDITIONING

OAKLAND TELEPHONE BUILDING

Installed By

Scott Company

SAN FRANCISCO - OAKLAND - SAN JOSE
LOS ANGELES

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bamberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Nevada State Board of Architects:
L. A. Ferris, President, Reno; Walter Zick, Secretary, Las Vegas; Directors, Aloysius MacDonald, Las Vegas; Russell Mills and Edward Parsons, Reno. Office, P. O. Box 2107, Las Vegas, Nevada.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; Charles T. Pearson, 2nd Vice-President; John M. Morse, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA — NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

ELECTED CHAIRMAN NEVADA STATE BOARD ARCHITECTS

L. A. Ferris of Reno, Nevada, was elected chairman of the state board of architects at a recent meeting in Tonapah. Walter Zick of Las Vegas was named secretary, and Aloysius MacDonald of Las Vegas, and Russell Mills and Edward Parsons of Reno were elected to the board of directors.

The members of the board were named by Governor Vail M. Pittman, and the board was created by an act of the last legislature.

The board will examine applicants, issue licenses, and consider transfers from other states. Practicing architects in Nevada are required to secure certificates of registration from the state board immediately.

WASHINGTON STATE CHAPTER

Floyd A. Naramore showed an interesting group of color slides depicting scenes in Mexico at the regular September meeting. Consideration was also given to the annual meeting, recommendations and suggested action.

* * *

The annual Joint-Meeting with the Spokane Chapter as host, will be held at Haydon Lake, Idaho, on October 1 and 2.

* * *

Appointment of Chapter members on Institute Committees include: Architectural Competitions

(See Page 39)

PARTICIPATING ARCHITECTS (left to right) Henry Hill, Fred Langhorst, Dann Emmons, Ernest Kump, Maria Corbett, and Hal Cruzan, moderator.

MACY'S SAN FRANCISCO presented ***"Bay Area Styles in Architecture"***

Home planners and the public had an opportunity to view current architectural trends in the San Francisco bay area recently when Macy's Store staged a "review" of house designs and interior decoration styles.

A list of twelve selected questions were asked of the architects participating and the public were then given an opportunity of asking questions and presenting their views.

Photographs of various residential and industrial buildings were displayed.

MR. ARCHITECT *specify Continental* **GLADIATOR**

FOR CUSTOMER SATISFACTION

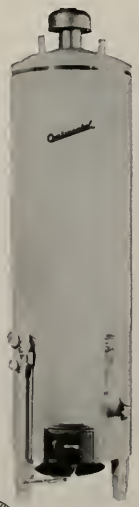
MR. JOBBER *recommend Continental* **GLADIATOR**

FOR CUSTOMER SATISFACTION

MR. PLUMBER *install Continental* **GLADIATOR**

FOR CUSTOMER SATISFACTION

The plus features of the Gladiator add up to complete satisfaction: an all-over white easy-to-clean exterior, a mushroom burner for more efficient heating, a condensation sump to prevent condensation drip. 100% safety control in any of 5 convenient sizes.



Continental **WATER HEATER CO.**

1801 Pasadena Avenue • Los Angeles 31, California

A subsidiary of National Steel Construction Co. with plants at LOS ANGELES • SEATTLE • LOGANSPORT

All models are approved by A. G. A. for LP, Natural and Manufactured Gases

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Harry W. Bolin, President; E. C. Hillman, Vice-President; Robert Short, Secretary-Treasurer. Directors: S. B. Barnes, Lewis Osborne, John Case, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

ENGINEERS TO LECTURE FOR U. C. EXTENSION

Appointment of twenty-three instructors to the engineering teaching staff of University of California Extension is announced by L. M. K. Boelter, dean of the U. C. L. A. School of Engineering and head of engineering extension.

The newcomers, all of whom will lecture for the adult education division of the state university this fall include Alfred B. C. Anderson, physicist; George F. Anisman, aero-dyanmics engineer; John F. Bishop, sales engineer; Martin C. Bonar and Ralph W. Jones, Jr., engineering staff consultants; Bernhardt L. Dorman, chief test engineer; Robert C. Engel, manager of a leading furniture manufacturing company; Ethelbert Favary, consulting engineer; John G. Frayne, engineering supervisor; Vincent Pagliarulo, methods engineer; Robert W. Hovey, aerodynamics engineer; James B. Rea, research engineer and test pilot; Kermit E. Every, aerodynamics engineer; John J. Keal, designer; Bernard Kwate, sales engineer; Albyn Mackintosh, consulting engineer; Paul Morgal, process engineer; Brooks T. Morris, pulse-jet engineer; Stanford Penner, California Institute of Technology; Roland L. Russell, architect; and Walter C. Hurty, Everett L. Jones, and John P. Omans all of the U. C. L. A. engineer teaching staff.

Addition of these men brings the total number of engineering instructors for University Extension in Southern California to eighty. A total of ninety-three University of California daytime and evening engineering courses will be available this fall at study centers in Los Angeles, Inglewood, Pasadena, Alhambra, Wilmington, Huntington Park, China Lake, and Long Beach. Extensive class programs will be offered at U. C. L. A. and in various centers in metropolitan Los Angeles.

Automatic

OIL HEAT

at its best!

FOR A HOME . . . OR FOR A SKYSCRAPER

Johnson Oil Burners will give you the *most dependable heat you can buy!* It doesn't matter whether you are heating a private home or a 1000-room hotel, that statement still stands, for there's a Johnson Burner for *every* heating job.

They are engineered to give you more heat per fuel-oil dollar for more years than any other heating equipment available.

If you want *true* economy and enduring efficiency, specify "Johnson Burners" . . . one of the great names in the oil burner industry. There's a Johnson dealer near you.

. . . . Johnson Oil Burners . . .

S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.

CAMPUS CONFERENCE HELD BY OPERATING ENGINEERS

An institute for operating engineers was held the latter part of August on the Los Angeles campus of the University of California under auspices of the University Extension, the U. C. L. A. Institute of Industrial Relations and the International Union of Operating Engineers.

Discussions included objectives of the American trade union movement; and appraisal of the economic effects of American trade unions; and an appraisal of legislative programs.

APPOINTED CONSULTING ENGINEER

Mack C. Lake, San Francisco mining engineer and geologist, has been appointed consulting engineer for the Oliver Iron Mining Company and other U. S. Steel Corporation subsidiaries, accord-

ing to a recent announcement by R. T. Elstad, president of the company.

Lake will deal largely with the company's ore developments in foreign fields, but will maintain offices in Duluth, Minnesota, and retain his residence in San Francisco.

He is a member of the American Institute of Mining and Metallurgical Engineers, the Society of Economic Geologists, the Lake Superior Mining Institute, and the Mining and Metallurgical Society of America.

ENGINEER ATTENDS PARIS MEETING

Samuel A. Schaaf, assistant professor of mechanical engineering on the Berkeley campus of the University of California, attended a joint meeting of the International Union of Theoretical and Applied Mechanics and the International Union of Astronomers in Paris, France, on August 16-19.

The meeting was attended by astronomers and engineers to discuss problems of aero-dynamics and astronomy. Dr. Schaaf's discussion was the result of his work with rarified gas motion in the university's supersonic low pressure wind tunnel.

HILDEBRAND SUCCEEDS LATIMER AS DEAN

Dr. Wendell Latimer, dean of the University of California College of Chemistry, and chairman of the department of chemistry, has retired from the university staff in order that he might devote his time to research work.

He has been succeeded by Dr. Joel Hildebrand, professor of chemistry.

Both Dr. Latimer and Dr. Hildebrand are leaders in American chemical research, and carried out critical wartime scientific missions.

APPOINTED HIGHWAY SPECIALIST

Henry K. Evans, San Francisco resident manager for the national transportating consulting firm of DeLeuw-Cather Company, has been appointed highway transportation specialist in the Chamber of Commerce of the United States, Transportation-Communication Department.

Evans succeeds Francis Twiss who has become director of planning and economics for the International Road Federation.

WATER CONDITIONING GROUP FORM ENGINEERING COMMITTEE

A joint engineering committee and three subcommittees were organized at a meeting of engineering and technical representatives of the National Association of Water Conditioning Equipment Manufacturers in Chicago recently.

Members of the committees include: C. A. Spaulding, Jr., Refinite Corporation, chairman of the joint engineering committee; Fred K. Lindsay, National Aluminate Corporation, chairman of the zeolite sub-committee; G. A. Patterson, Red Jacket Manufacturing Company, secretary; Vernon Palmer, Bruner Corporation, chairman of the Steel tank sub-committee; John Harding, John Wood Manufacturing Co., Inc., secretary; J. E. Dymond, Automatic Pump and Softener Corp., chairman of the component parts sub-committee; C. F. Barksdale, Calgon, Inc., secretary.

The joint engineering committee chairman with chairmen of the three sub-committees will work as a group in the selection and assignment of engineering projects as indicated by the personnel of the entire committee.

APPOINTED SUPERINTENDENT OF SHASTA DAM AND KESWICK DAM

George D. Atkinson, electrical engineer at Shasta Dam, has been named superintendent of operations of Shasta Dam and power plant and of Keswick Dam and power plant, according to a recent announcement by Richard L. Boke, director Bureau of Reclamation, U. S. Department of the Interior.

Atkinson has held engineering positions with the Southern California Edison Company, the Fed-

"ECON-O-MATIC" . . . is the automatic Stanley Door Hardware Set that makes lightweight plywood doors 100% practical for garages. Designed for doors weighing up to 150 lbs. Cost little more than old-style hardware. For smart appearance — faultless action — long service — specify Stanley.

The Stanley Works, New Britain, Conn.

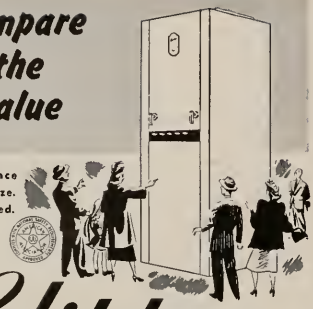
*Copyrighted

Simple to Install
Requires Only 2¼-in. headroom

STANLEY
Reg. U.S. Pat. Off.

HARDWARE · HAND TOOLS · ELECTRIC TOOLS

Compare the Value



Big in performance . . . compact in size. Competitively priced.

Clipper

FORCED AIR GAS FURNACES

Simple, heavy, sturdy. Precision-built by specialists in forced air gas heating. Unrivaled in accessibility. Finest controls. Famous Henderson multi-stream heat exchanger; assures uniform heating, high efficiency, low fuel cost.

CLIPPER PANELS are fitted to tolerances of 1/64"; must be easily removable and replaceable—typifying "custom" care in construction, pride of craftsmanship.

HENDERSON BLOWERS are manufactured complete in our own factory; delicately balanced for quiet smoothness and longer life!

FACTORY TESTING—Every Henderson unit is factory-assembled and then thoroughly tested in actual operation.

Write for Catalog Sheets

HENDERSON

FURNACE AND MTG. CO. • SEBASTOPOL, CALIF.

CLIPPER • CLIPPERETTE • HENDY "60"

eral Power Commission, and the U. S. Army Engineers. He served as an officer in the Navy during World War II.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"The Value of Public Relations to the Individual Engineer" was the subject of a talk by Russell Pierce of Hodges, Pierce & Company, Public Relations, at the regular September meeting.

* * *

The August meeting, the annual East Bay meeting of the Structural Engineers, was devoted to a program incorporating a "Symposism on Foundation Problems", with William H. Jervis, engineer with the O. J. Porter Company, Consulting Engineers; Norman C. Raab, Design Engineer for the State Division of San Francisco Bay Toll Crossings; and William W. Moore, Senior Partner of the firm of Dames & Moore, Foundation Engineers, leading the discussion.

* * *

The October meeting will be held in conjunction with the Annual Meeting of Structural Engineers in Yosemite Valley, October 13-15.

* * *

NEW MEMBERS: Earl M. Paddack, Curtis E. Smith and Bruce G. Woolpert. Affiliate Members William E. Dreusike, Alfred M. Sperry, and Ed West.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The September meeting consisted of a tour and inspection of new equipment at the Fontana plant of The Kaiser Steel Corporation. Many interesting installations have been added to the plant since the close of the war, and members were given an excellent opportunity to see the equipment in action.

NEW SAN FRANCISCO DISTRICT ENGINEER IS ANNOUNCED

Col. Fremont S. Tandy has been appointed to the position of District Engineer of the San Francisco District, Corps of Engineers.

A native of San Francisco, Tandy has been on duty in Panama. He served with the 20th Corps of the Third Army in France during World War I being in charge of all major bridge construction. During the second attack on Metz, Col. Tandy was injured and after hospitalization, returned to the United States.

Prior to the War, he assisted in organizing the Zanesville Engineer District and supervised the construction of fourteen flood control dams in Ohio together with the construction and relocation of roads, railroads, gas and power facilities, and brought to a successful conclusion one of the first integrated flood control projects in the United States.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

IT CAN BE DONE. Parker & Hill, Consulting Engineers, Seattle, Washington.

An unusual 20-page brochure containing descriptive case histories of individual water and sewer systems, water storage, sewage treatment plants, platting, and street improvement projects.

Photographs and factual details describe each step in the engineering, construction, and financing of projects ranging from a sewer treatment plant for a town of 5,000 to water storage facilities involving a circular 1,000,000 gallon reinforced concrete reservoir. A brief summary with each case history highlights costs, population served, quantities, financing and charges to users.

* * *

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

118. RUBATEX INSULATION HARDBOARD: Detailed construction diagrams with standard forms of specification describes characteristics of the product. Folder tells how cellarless houses and similar structures can be efficiently and permanently insulated against condensation and heat loss in slab floor construction. A.I.A. 37, 6 pages illus.

119. FIBERGLAS ACOUSTICAL MATERIALS: New brochure covering forms, properties and methods of installing acoustical materials, including plain and perforated tile, and board. Fiberglas thermal insulations for acoustical purposes is also described. Illustrated with numerous application photographs. A.I.A. 39-B, 8 pages.

120. CEMENT SETTING COMPOUND: A pamphlet describing the use of Sika "C" for a shrinkage reducing accelerator for Portland Cement to set, bond, embed, grout, surface or repair veneers, slabs, terrazzo, floors, walls, hooks, metal reinforcing, etc. Its uses for marble, limestone, granite, concrete and natural or artificial stone. A.I.A. 3-B-2, 22, 23Q, 7D, 4 pages. 5/49

121. FRY FLASHING REGLET: The catalog introduces a new standard way to install counter flashing with the use of rolled metal forms called Fry Flashing Reglets. Plastic rope is employed for weather seal allowing removal of the flashing for roof maintenance. 8 pages - installation detail illus. 8/49

122. IDAHO WHITE PINE: Complete information on the properties uses and grades of Idaho White Pine is contained in the tables and illustrations of this catalog released by the Western Pine Association. The catalog is carefully compiled for construction uses and is a good source of information. A.I.A. 19, 64 pages in color, illus. 7/49

ARCHITECT AND ENGINEER,
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

118 119 120 121 122

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after (October 15th.—A. & E.)

"AMERICAN - MARSH"
CONDENSATION UNIT

Pumping Machinery for Every Purpose

For Service Call DOuglas 2-6794 or MUtual 8322

SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles

525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834

GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer

REPUBLIC STEEL

See Sweet's Catalog File or write us for full information.

REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO

DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork

16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. 5-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Galitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. MacJennett, Mueller Brass Company, 475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

INTRODUCING: E. J. (Jack) Keefe, Jr.

Jack was born in Cheyenne in 1910 and raised in Cheyenne and Laramie, attended high school in both cities, and graduating at Cheyenne in 1929.

Attended University of Michigan at Ann Arbor, 1929 to 1930, and University of Wyoming, Laramie, 1930 to 1932.

After leaving college he spent four years in Kansas City, Missouri, with the Sinclair Refining Company. Then did a bit of traveling about the Middle West in the interests of a finance company, and lived at Detroit, where he was in the finance business for over six years.

Jack has been Merchandising Manager, Western District, since October, 1948, of the Creped Wadding Division, Kimberly-Clark Corporation of Neenah, Wisconsin, manufacturers of Kimsul insulation, other cellulose products and paper, with offices in the Stock Exchange Building, 155 Sansome Street. Previously, five years as Sales Representative with the same company, in the Southwe territory, located in Los Angele

E. J. KEEFE, JR.
Merchandising Manager of Western District, Creped Wadding Division, Kimberly-Clark Corporation

He reports he is very happy be in the West, particularly on th West Coast, after more than te years in the Middle West, ar happy to be a part of the Sc Francisco Chapter of the Prod cers' Council, after having bee indoctrinated in the Southern Ca fornia chapter in Los Angele which also is a fine chapter.

He is an associate member the Pacific Coast Building Of cials' Conference, the Internatio al Concatenated Order of Hoo-Hc (Editor's note—Now, we've hear everything) and the Society of I dustrial Packaging and Materia Handling Engineers.

Jack reports he has been ma ried for ten years, and that he an his wife both enjoy golf and swir ming, although business has i terrupted these activities recentl

NATIONAL NEWS

We were fortunate in having Douglas Whitlock, former president of the National Council, address our August 23rd meeting. His speech was made to familiarize our local chapter with the national program being worked out between the Producers' Council and the A.I.A.

It was explained that we have a joint committee of members of the council and the A.I.A., and that together they work out all problems pertaining to the Construction Industry. "We now have a relationship with the A.I.A., which is more workable than ever before," Mr. Whitlock stated.

The National Council and the A.I.A. are still working on the Modular Coordination program in order to reduce construction costs, and to make our products more standard, thus being able t combine various other products involved in th building.

We also learned that the National Council i making a climate study with the A.I.A., so that th proper materials will be chosen for the area in volved. It will be particularly interesting to get th report on the San Francisco Area, as we are natu rally interested in our own surroundings.

Mr. Whitlock gave us a much clearer picture c the National organization than we previously hac and we hope it can be arranged for regular visit by officers of the National Council.

LOCAL NEWS

We learn that Herm Hennessey is no longer witl the Aluminum Company of America, and we hop

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

ne will see this issue to know that the members of our Chapter wish him success.

It has been reported that Theodore "Pete" Howard has been given a promotion with Mueller Brass Company, and we wish him all the luck that he is entitled to, but we will miss his smiling face at our meetings, as he is being transferred to the Grand Rapids, Michigan, office.

Don Lyon is scheduled to attend the Chapter Presidents' Conference, September 29 and 30, at the Edgewater Beach Hotel in Chicago. The annual election of National officers will also take place at this meeting.

COMING EVENTS

The regular October meeting will be a business meeting, and we will hear Don Lyon give his usual excellent report on his Chicago trip.

We have received word that the Annual Joint Convention of the California Council of Architects, A.I.A. and Producers' Council will be held in Palm Springs, November 6-7-8. Harvey Whitely of San Diego is the chairman for the A.I.A., and J. E. Christie, President of the Southern California Chapter, is completing arrangements for the Producers' Council participators. We hope to have complete information in the next issue, but please set aside these dates.

There is nothing further to report on the Xmas Jinx, but we believe it will be the early part of December. Keep watching this page.

NEW MEMBER:

Your Editor had the pleasure of lunching with our newest member, M. J. Kramer, who is associated with Nichols Wire and Aluminum Company. We might point out that he has joined our Chapter, even though his company has indicated he should belong in Los Angeles! Let's give Mr. Kramer a hand—of welcome, that is.

LOS ANGELES GOES INTO THE HOUSING BUSINESS

Los Angeles by a vote of 13 to 0 of the City Council has adopted a cooperative agreement with the L. A. City Housing Authority authorizing the City Housing Authority to apply to the U. S. Public Housing Agency for 10,000 units of low-rent housing at an approximate total cost of one hundred million dollars.

"Los Angeles leads the parade of cities anxious to take advantage of the recently passed federal legislation, with what is probably the first formal request for funds," declared Nicola Giulii, chairman of the housing committee.

GAS HOLDER

The Pacific Gas & Electric Company will build a steel gas holder near Point Richmond in Contra Costa County at an estimated cost of $4,900,000.

KEEP 'EM SMILING
. . . with good wiring

A "new unit" to you is a "dream house" to them. By the hour they pore over the plans in happy anticipation. You can keep 'em smiling by making sure each little detail of construction is perfect for their needs. When you specify **Certified Adequate Wiring** in their building plans, you automatically assure them enough outlets, heavy enough wire, proper lighting and enough circuits for convenient, efficient operation. It's a good investment for them . . . a good investment for **you.**

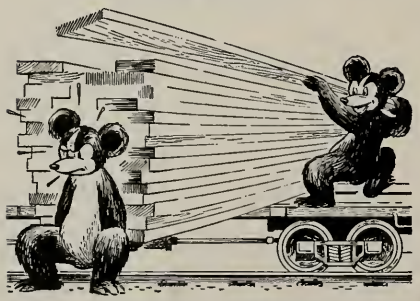
★

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street, San Francisco 3

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● PROTECTS AGAINST DECAY AND TERMITE ATTACK
Specify it in your home
Available through Lumber Dealers
LOS ANGELES
601 W. 5th Street
Phone MIchigen 6294
SAN FRANCISCO
333 Montgomery Street
Phone DOugles 2-3883
J.H. Baxter & Co.
AGENTS FOR WEST COAST WOOD PRESERVING CO. SEATTLE, WASH.

HONEST GRADING...
no substitutes



E. K. WOOD LUMBER CO.
GENERAL OFFICES: P. O. Box 1618, Oakland, California
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

HEADLINE NEWS & VIEWS

By E. H. W.

NUMBER ONE on the home builder's hit parade is the ranch type one-story or one and a half story basementless house, according to architects and plan services.

* * *

HOW to make an old home new with better plumbing was one of the themes of the recent 1949 Home Comfort Exposition in Cleveland, according to the Plumbing & Heating Industries Bureau.

* * *

TIN and its Uses—a publication issued in Middlesex, England, for the tin industry announces that it "is being issued at irregular intervals"—another indication of the insecurity felt by British industry under present conditions.

* * *

USO—Our Share In The National Security. The budget for 1950 calls for an expenditure of $12,100,000.00—Don't forget this when you plan your budget.

* * *

"THE advantages of running water under pressure for the progressive farmer cost less now in terms of corn, wheat, beef, and other farm products than they did ten years ago."—National Association Pump Manufacturers.

* * *

OCTOBER is called the "Red Feather Month" because that is when the Community Chests conduct their annual campaigns to support more than 14,000 Red Feather services for local health, welfare and recreation.

* * *

DURING 1947-48 the amount of industrial plant construction and expansion in the Los Angeles area totaled $196,993,000.—Los Angeles Chamber of Commerce.

* * *

MANUFACTURING industries in the San Francisco industrial area were employing 104,300 persons in June, compared to 103,000 in May.

* * *

A new sound slide film showing application and installation methods of copper tubing in rural and suburban water systems is now available through the National Association of Domestic and Farm Pump Manufacturers, Chicago, Ill.

* * *

THE San Francisco Chamber of Commerce has stated it is opposed to "unwarranted government interference in basic scientific research and education in the sciences"—whatever that is.

IN THE NEWS

TRANSFERRED TO SAN FRANCISCO

Raymond DesCamp, formerly Chief Estimator in the Seattle office of the Fentron Steel Works, has been appointed sales and service manager of the company's new offices in San Francisco.

STORE MODERNIZATION SHOW ON WEST COAST

Designed to show the progressive merchandiser the advantages of acrylic plastic for store modernization and merchandising aids, the Rohm & Haas Company will exhibit their "Plexiglas Store Show", in San Francisco, on October 4, 5, 6, at the Fairmont Hotel.

The following week it will be shown at the Biltmore Hotel in Los Angeles, October 12, 13, and 14.

The exhibit is an enlarged edition of that shown at the recent Store Modernization Show in New York City, and consists of an actual shop, complete with backlighted storefront and featuring signs, showcases, wall cabinets, lighting fixtures, partitions, displays and other merchandising aids.

SOUTHWEST AIR CONDITIONING EXPOSITION SET FOR JANUARY

The Southwest Air Conditioning Exposition, representing manufacturers from all parts of the nation, will be held in Dallas, Texas, from January 23 to 27, 1950, according to a recent announcement.

The exhibit will be held in conjunction with the 56th Annual Meeting of the American Society of Heating and Ventilating Engineers.

WESTERN HEMLOCK PLYWOOD COMMERCIAL STANDARD

A recommended revision of Western Hemlock Plywood has been submitted to producers, distributors, and users for consideration and acceptance.

Proposed by the Douglas Fir Plywood Association it provides minimum requirements for eight grades of Interior type and Exterior type plywood made from Alaska cedar, Port Orford cedar, Western red cedar, California redwood, Western white pine, Sitka spruce, Western larch, Western hemlock, Noble fir, and the commercial white firs.

GRAMMAR SCHOOL — SALINAS, MONTEREY COUNTY: Prunedale Elementary School District - owner - 9 classrooms, kindergarten, office & toilet rooms, $141,733. ARCHITECT: John I. Easterly - Watsonville - frome & stucco construction. GENERAL CONTRACTOR: E. A. Hathaway & Co. - San Jose.

FURNITURE STORE — SAN JOSE, SANTA CLARA COUNTY: A. Dempsey & John S. Mise - owners - $62,566. ARCHITECT: Donnell E. Jaekle - San Jose - 1 story; 135 x 200; reinforced concrete, structural steel construction, steel sash, concrete floor, Zourte & tile & plate glass front. GENERAL CONTRACTOR: Kocher Construction Co. - San Jose.

RESIDENCE — HILLSBOROUGH, SAN MATEO COUNTY: Mr. Allen - owner - $50,000. ARCHITECT: Ralph Wastell - Oakland - frame construction, shake roof, steel sash. GENERAL CONTRACTOR: Eric Ohlund - Burlingame.

CHURCH & SUNDAY SCHOOL—SAN JOSE, SANTA CLARA COUNTY: Mission Covenant Church - owner - $150,000. ARCHITECT: Clifford E. Sobey - Los Gatos - frame & stucco construction. GENERAL CONTRACTOR: O. E. Anderson - San Jose.

THE SMOOT-HOLMAN touch
Machines may be accurate, but never inspired. The hand of the skilled craftsmen is the only instrument which ever turns out unusual work...better work than anyone expects...better work even than required for R. L. M. certification. It is this kind of work, augmented by ultra-modern production methods, which has built the reputation Smoot-Holman enjoys today.
ILLUMINATION EQUIPMENT
SMOOT-HOLMAN
INGLEWOOD, CALIFORNIA
MADE IN U.S.A.

SMOOT-HOLMAN

OPEN-END D-P LINE-LITE

An IndustroLux fluorescent luminaire designed for continuous mounting. For two or three 40-watt lamps, featuring depressible plungers for easy installation and removal. Supplied for 110/125 volt 60-cycle A. C. operation.

Offices in Principal Western Cities • Branch and Warehouse in San Francisco

CEDARWALLS
WONDER-COTE PROCESS
Red Cedar Shingle Sidewalls
9 attractive colors and white.
Machine grooved and carton packed at Factory.
Write for Name of your Local Dealer
SIDEWALL LUMBER CO.
1994 Oakdale Ave. San Francisco 24 ATwater 2-8112

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S PAT OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CODE APPROVES USE OF PLASTICS IN SIGNS

The American Standards Association has recently issued a model sign code containing sections dealing specifically with plastic faces, letters, and decorations on all types of signs and displays.

The code is sponsored by the American Municipal Association and the Outdoor Advertising Association of America and was prepared in collaboration with representatives of government agencies and industrial groups, including the sign industry and insurance organizations.

ROLATAPE OFFERS RAPID METHOD OF WALL AND FLOOR MEASURING

Measurements of both exterior and interior walls and flooring is made easy and accurate by the ROLATAPE, a new apparatus featuring a wheel with a fixed tape recessed between rubber rims, which is manufactured by the Co-Jay Corp'n of Los Angeles.

Operated by one man, there is nothing to drag, wind, or unwind or peg down. Back edge of wheel is placed at starting point and is then rolled to destination. The figure indicated on the tape by a pointer is added to the footage registered on a recorder at side of wheel to determine total distance measured. Vertical measurements may also be easily made.

It is light in weight, has telescoping handle which shortens to 20" for carrying or storing. Rubber rims will not mar or scratch surfaces.

LOWER PRICED HOUSING

According to a recent report issued by the San Francisco Chamber of Commerce, two out of every three new homes now under construction in the Bay Area are being built to sell for $8,500 or less.

The report of the Chamber says, "It is expected that expansion of home construction in the lower priced field will offset any previously expected lag in over-all construction volume and keep building employment and payrolls at a continued high level."

The report is the result of a project undertaken in the spring to determine trends in types and volume of construction in the bay area.

COLUMBIA STEEL ANNOUNCES PERSONNEL CHANGES

O. L. Pringle was elected vice-president in charge of sales! Laurence S. Dahl was elected vice president in charge of operations, and H. S. Worthington was named assistant to Mr. Dahl of Columbia Steel Company, according to a recent announcement by Alden G. Roach, president of the company.

Pringle has served as vice president in charge of operations of Columbia Steel Company since 1938; Dahl comes to Columbia Steel from Carnegie-Illinois Steel Corp'n., and Worthington has been with Columbia Steel for several years.

A. I. A. ACTIVITIES

(From Page 28)

and Standard Accounting Methods, Waldo B. Christenson; Unification, Ralf E. Decker; Hospitalization and Public Health, Perry B. Johanson, and William J. Bain has been named to the Jury of Fellows.

* * *

Chapter Associate Wendell H. Lovett, recently won 2nd prize in a competition for an office building and headquarters for the U. S. Jr. Chamber of Commerce, to be located in Tulsa, Oklahoma.

* * *

Chapter Associate Arthur E. W. Dodds has been appointed assistant superintendent of buildings for the City of Seattle.

* * *

NEW MEMBERS: Carl F. Gould, Bjarne C. Olsen, Oliver W. Olson, William A. Manley, Francis B. Mayer, and MacKay Malcolm have been elected Corporate Members. Silas E. Nelson of Tacoma has been reinstated to membership.

NORTHERN CALIFORNIA CHAPTER

Frederick M. Mann, Sr., F.A.I.A., member Emeritus of the Institution and Northern California Chapter, was a recent guest speaker.

Members were treated to an interesting program presented last month by Grey Warnum, F.R.I.B.A., and prominent British Architect, who was in San Francisco.

JOINS ARCHITECTURAL FIRM

John T. Schneider, A.I.A. architect, has joined the architectural association of Burns, Bear & McNeil of Portland, Oregon.

Schneider was formerly vice president and production manager for Timber Structures, Inc.

ARCHITECT MOVES

John Lyon Reid, A.I.A., architect, has announced the removal of offices from 417 Market Street to 109 Stevenson Street, San Francisco.

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.

SAN FRANCISCO, CALIF. HEMLOCK 4100

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only

$10 a month

ARCHITECT'S REPORTS

Published Daily

The ARCHITECT and ENGINEER, Inc.

68 Post Street, San Francisco - DO 8311

IN THE NEWS

HOSPITAL BONDS

The Tahoe Forest Hospital District recently approved a bond issue of $150,000, with the funds going to the construction of a 12-bed hospital building.

George C. Sellon, Sacramento, is the architect.

PACIFIC DISTRICT MANAGER

Arthur D. Bragg has been named Pacific District Manager of General Electric's Apparatus Department, succeeding Allen G. Jones who retired on October 1st.

Bragg is well known on the West Coast. For several years he was with the company's Fresno branch and later served as assistant manager of the Los Angeles office.

MUNICIPAL POT-POURRI

The League of California Cities will hold its 51st annual convention in San Francisco on October 24-26.

Among topics coming up for discussion are codes, housing, and zoning.

APPOINTED

J. W. Mahoney, vice president of Gladding-McBean Co., has been appointed manager of the company's central division with headquarters in San Francisco, according to a recent announcement by Atholl McBean, chairman of the board.

The central division extends from the Philippines to Salt Lake City and from the southern Oregon border to the Tehachapi.

ELEVATOR COMPANY APPOINTS NEW PORTLAND MANAGER

L. F. Casley of Chicago, Ill., has been appointed manager of the Montgomery Elevator Company branch office at Portland, Oregon, according to a recent announcement by C. A. Schmidt, president of the company.

UNIVERSITY OF CALIFORNIA INAUGURATES BUILDING PROGRAM

The Regents of the University of California have approved the beginning of a multi-million dollar building program to erect on the Los Angeles campus one of the most modern and complete medical research centers in the world.

Scheduled for immediate construction is the $15,500,000 medical school and teaching hospital unit, which with its smaller satellite buildings, will form the nucleus of the project; covering 35 acres at the south end of the U. C. L. A. campus and 34 acres recently acquired from the government.

NAMED SALES MANAGER

Leo C. Monahan, Upper Montclair, N. H., has been appointed manager of sales for the Woodfiber Division of the Simpson Logging Company of Shelton, Washington, according to an announcement by W. G. Reed, President.

Monahan has been in sales and promotion work on the Pacific Coast and East for the past 25 years. In 1924-25 he served as secretary and assistant to Herbert Hoover, then Secretary of Commerce.

CHURCH REMODEL—TURLOCK, STANISLAUS COUNTY: Presbyterian Church, owner, $24,000. ARCHITECT: Melton V. Mowbray, Jr., San Leandro. GENERAL CONTRACTOR: F. J. Wirtner, Turlock.

COUNTY COMMUNITY HOSPITALS — ALTURAS, MODOC COUNTY: County of Modoc, owner; 25 beds at Alturas; 7 beds at Cedarville, $667,000. ARCHITECT: D. D. Stone & Lou Mulloy, San Francisco; 1 story; frame and stucco construction. GENERAL CONTRACTOR: Tawco Construction Co., Fresno.

AMERICAN LEGION BUILDING — LODI, SAN JOAQUIN COUNTY: Lodi American Legion Post, owner, $153,033. ARCHITECT: Elmore G. Ernst, Stockton; 1 and 2 story, reinforced concrete and frame construction. GENERAL CONTRACTOR: G. R. Dickhoff, Acampo.

WAREHOUSE REMODEL — SAN FRANCISCO: General Electric Co., owner, $75,000. ARCHITECT: A. Appleton & H. N. Wolfard, San Francisco; interior and exterior remodel. GENERAL CONTRACTOR: Dinwiddie Construction Co., San Francisco.

YOSEMITE JUNIOR HIGH SCHOOL—FRESNO, FRESNO COUNTY: Fresno Board of Education, owner, $514,349. ARCHITECT: David Horn & Marshall Mortland, Fresno. GENERAL CONTRACTOR: Harris Construction Co., Fresno.

NOW! EXPANDED ORDER DEPARTMENT MAKES

KYLE SERVICE
BETTER THAN EVER
Call 7-7831 IN STOCKTON
4-4651 IN FRESNO
ask for
ORDER DEPARTMENT

KYLE & COMPANY serves you with

STRUCTURAL AND REINFORCING STEEL—ALUMINUM SHEETS AND ACCESSORIES
WIRE PRODUCTS: BALE TIES, WIRE ROPE, NAILS. FENCING, POULTRY NETTING
BOLTS AND NUTS, SCREWS, SAWS AND SHOP SUPPLIES. AIR COMPRESSORS
SASH ROOFING AND SIDING MATERIALS. ELECTRIC TOOLS AND ACCESSORIES

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$50.00 to $90.00 per M, truckload lots, delivered.

Fire Brick—Per M—$90.00 to $125.00.

Cartage—Approx. $9.00 per M.

Paving—$75.00.

BUILDING PAPER & FELTS

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Sheathing Papers—	
Brownskin, Standard 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00
Asphalt sheathing, 15-lb. roll	$2.20
30-lb. roll	2.93
Campcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$3.13
Deadening felt, 1-lb.	3.69
Asphalt roofing, 15 lbs.	2.20
Asphalt roofing, 30 lbs.	2.93
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$1.75
Medium	2.04
Heavy	2.40
Extra Heavy	2.77

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	$4.75
Nails, per keg, base	$10.55
8-in. spikes	10.55
Rim Knob lock sets	1.80
Butts, dull brass plated on steel, 3½x3½	.73

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lepis (Nos. 2 & 4)	3.56	3.94
Olympic (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.38 per bbl. f.o.b. car; delivered $3.60.

Per Sack, small quantity (paper) $1.00

Carload lots, in bulk per bbl. 2.78

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White — 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

1-2-4 mix, to 10 yards*	$11.75
10 to 100 yards*	10.75
Over 100 yards*	10.25

* Delivered to site.

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$.16	$.16
6x8x16-inches, each	.21	.21
8x8x16-inches, each	.25	.25
12x8x16-inches, each	.33	
12x8x24-inches, each		.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd. $6.50

⅜-inch to ⅛-inch, per cu. yd. 6.50

⅛-inch to 0-inch, per cu. yd. 7.00

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnasite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. ¼"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

⅜ x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

⅜ x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

⅜" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inleid Floor Co.)

GLASS—

Single Strength Window Glass	$ .25 per □ ft.
Double Strength Window Glass	.35 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
¼ in. Polished Wire Plate Glass	1.00 per □ ft.
¼ in. Rgh. Wire Glass	.58 per □ ft.
Obscure Glass	.45 per □ ft.

Glazing of above is additional.

Glass Blocks ..... $2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common ..... $85.00 per M
No. 2 Common ..... 83.00 per M
Select O. P. Common ..... 90.00 per M

Flooring—
Per M Delvd.
V.G.-D.F. B & Btr. I x 4 T & G Flooring $225.00
"C" and better—all 225.00
"D" and better—all 225.00
Rwd. Rustic—"A" grade, medium dry ..... 185.00 to 24 ft.
"B" grade, medium dry 150.00
Plywood ..... 18c to 20c per ft.
Plyscord ..... 11½c per ft.
Plywell ..... 9c per ft.
Plyform ..... 15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes,— 8.00 per square

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.44, Copper Bearing, per carloads, per 100 sq. yds. $35.50
Standard Ribbed, ditto 37.70

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 end up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine ..... $1.85 per gal. in 5-gal. cont.
Raw Linseed Oil ..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil ..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil ..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Seilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.

Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Cedar in place, 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resewn Cedar Shakes, 10" Exposure $24.00
¾ to 1¼ x 25" Resewn Cedar Shakes, 10" Exposure $29.00
1 x 25" Resewn Cedar Shakes, 10" Exposure 22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton $99.50
Vitrified, per foot:
Standard, 8-in. ..... $ .62
Standard, 12-in. 1.09
Standard, 24-in. 4.72
Clay Drain Pipe, per 1,000 L.F. in carload lots:
Standard, 6-in. $211.00
Standard, 8-in. 352.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvanized iron, 65c sq. ft. (flat).
Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill.
$270 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd. $7.15
⅜-in. Rd. 6.40
½-in. Rd. 6.20
⅝-in. Rd. 6.05
¾-in. & ⅞-in. Rd. 6.00
1-in. & up 5.95

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.75 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$2.00 per sq. ft.
Asphalt Tile Floor ⅛" x ⅛"—$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—
Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:
2 x 6 x 12 ..... $1.25 sq. ft.
4 x 6 x 12 ..... 1.50 sq. ft.
2 x 8 x 16 ..... 1.45 sq. ft.
4 x 8 x 16 ..... 1.75 sq. ft.

Building Tile—
6x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x3-inches, per M $124.00
12x12x4-inches, per M 139.50
12x12x0-inches, per M 176.00

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

TELEPHONE BUILDING . .

(From Page 27)

Flush type incandescent fixtures, 12 to 15 foot candles, are used in the cafeteria.

Telephone switchboard rooms are equipped with indirect incandescent fixtures with silver bowl lamps—15 to 20 foot candles.

Stair lights are remotely controlled by relays with momentary-contact switches on each landing in lieu of three- and four-way switches. Extended master control is provided through pulsing relay and time clock, arranged so that required stair lights will be automatically turned on during operation of emergency standby equipment in case of utility's power failure.

Annunciator in engineer's office indicates abnormal condition on boilers, failure of utility's service, operation of emergency generator equipment, high-water on sewage ejectors, and requirements for air conditioning. Controls with pilot lights for all supply and exhaust fans and air conditioning equipment are centralized on master control panel in the boiler room.

The entire project has been under the general supervision of J. W. Powell, chief engineer for the telephone company.

NEW GRAMMAR SCHOOL

A general contract has been awarded to Cullen & Cullen, Merced contractors, for the construction of a $113,000 new grammar school building at Mendota. Frank Wynkoof & Associates of Fresno are the architects.

SCHOOL BIDS REJECTED: A $42,222 bid for the construction of a 2-class room and kindergarten addition to the Courtland Grammar School (Sacramento County) has been rejected by the Bates Joint Union Elementary School District.

OFFICE AND SHOP BUILDING: Kelley & Peletz of San Francisco have been awarded a $50,000 contract for the construction of a office and shop building in Berkeley. John K. Kelley, San Francisco, is the architect.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to Sept. 1, 1949.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	Santa Clara	Solano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	3.00*	3.00	3.00	2.50	3.00	3.00	3.00	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.175	2.175	2.175	2.175	2.175	2.175	2.12	2.12	2.12	2.12	2.12
CEMENT FINISHERS	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
ELECTRICIANS	2.50	2.50	2.50	2.25	2.50	2.50	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.32	2.32	2.32	2.32	2.32
STRUCTURAL STEEL	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.20	2.20	2.20	2.20	2.20
STRUCTURAL	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
CONCRETE	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
LATHERS	2.8125	2.8125	2.8125	2.8125	2.00*	2.50*	2.8125	2.8125	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
PLASTERERS	2.8125	2.50*	2.50*	2.75*	2.25*	2.50*	2.50*	2.8125	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.50	2.25*	2.25*	1.775*	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.25	2.25	2.25	1.875	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.25	2.25	2.25	2.125	2.30	2.40	2.125	2.125	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	3.00	2.8125	2.8125	2.75*	2.8125	2.8125	2.8125	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.675	2.675	2.675	2.15	2.00	2.675	2.675	2.4375	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:
CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

IMPORTANT INFORMATION pertaining to the construction industry throughout northern California is contained in the DAILY REPORTS. Subscribe NOW, only $10 per month. ARCHITECTS REPORTS, 68 Post Street, San Francisco.

GET THE BEST, don't be satisfied with anything but the best. Window sash, Doors, Cabinets, etc. Town Talk Sash & Door Mill, 524 9th St., Sacramento.

WANTED! A market for the complete output of a sizeable redwood shingle mill: Write Box W, Architect & Engineer, 68 Post Street, San Francisco.

ADVERTISERS wishing to sell building materials and products, GET THE BEST RESULTS from regular advertising schedules in ARCHITECT & ENGINEER magazine. Write for complete information, including rates, circulation, etc., 68 Post Street, San Francisco.

FLOOR COVERINGS for industrial, commercial, and residential construction. Complete lines, one of the oldest, best established organizations in the Sacramento Valley. LATTIN'S, INC., 1519 Alhambra Blvd., Sacramento.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

PARISH HALL — SACRAMENTO, SACRAMENTO COUNTY: Roman Catholic Bishop of Sacramento, owner, St. Mary's Parish, $23,000. ARCHITECT: Clarence C. Cuff, Sacramento; frame and stucco construction, hall and kitchen. GENERAL CONTRACTOR: Pesce Bros., Sacramento.

HIGH SCHOOL—CHOWCHILLA, MADERA COUNTY: Chowchilla Union High School District, owner, library, domestic science and classroom building, $146,250. ARCHITECT: Wm. D. Coates & Maurice J. Metz, Fresno. GENERAL CONTRACTOR: Graham & Jensen, Merced.

CHURCHJ — ORINDA, CONTRA COSTA COUNTY: Church of Christ Scientist, owner, $25,000. ARCHITECT: Henry H. Gutterson, San Francisco; frame construction. GENERAL CONTRACTOR: Person Construction Co., Oakland.

DRIVE-IN THEATRE — HOLLISTER, SAN BENITO COUNTY: Hans Severinsen, owner, $40,000. ARCHITECT: Stanley Karp, Gilroy; theatre will accommodate 400 cars.

CONVENT — SAN BRUNO, SAN MATEO COUNTY: Roman Catholic Archbishop of San Francisco, owner, St. Bruno Parish, $76,250. ARCHITECT: Vincent Buckley, San Francisco; 2 story and basement; frame and stucco construction. GENERAL CONTRACTOR: Jos. Bettancourt, San Bruno.

STORE BUILDING — SACRAMENTO, SACRAMENTO COUNTY: ARCHITECT: Gordon Stafford, Sacramento; 1 story and basement; 70 x 80; concrete block and structural steel construction, $100,000. GENERAL CONTRACTOR: Edwin J. Mackey, Sacramento.

DRIVE-IN BANK BUILDING — SAN JOSE, SANTA CLARA COUNTY: First National Bank of San Jose, owner, $33,300. ARCHITECT: Kress & Gibson, San Jose; 1 story; 40 x 100; reinforced concrete construction. GENERAL CONTRACTOR: Oscar W. Meyer, San Jose.

NEW GRAMMAR SCHOOL—RIDGECREST, KERN COUNTY: Indian Valley Union Elementary School District, owner; 10 classrooms, kindergarten, offices and toilet rooms, $234,858. ARCHITECT: Wright, Metcalf & Parsons, Bakersfield; frame and stucco construction. GENERAL CONTRACTOR: Barringer & Botke, Santa Paula.

THEATRE BUILDING — COLMA, SAN MATEO COUNTY: Excelsior Amusement Co., owner; 1200 seats, 2 stores, $145,000. ARCHITECT: A. A. & A. MacK. Cantin, San Francisco. GENERAL CONTRACTOR: Cahill Construction Co., San Francisco.

JOSEPH C. LANEY TRADE & TECHNICAL INSTITUTE — OAKLAND, ALAMEDA COUNTY: Oakland Board of Education, owner, $984,843. ARCHITECT: E. Geoffrey Bangs, San Francisco; 2 story; 100 x 300; reinforced concrete building, 1 story, 14,000 square feet auto shop building. GENERAL CONTRACTOR: Louis C. Dunn, San Francisco.

COMPLETION OF HIGH SCHOOL AUDITORIUM — BERKELEY, ALAMEDA COUNTY: Berkeley Board of Education, owner, $1,061,600. ARCHITECT: Henry H. Gutterson, San Francisco. ENGINEER: Wm. G. Corlett, Oakland, interior completion of auditorium building. GENERAL CONTRACTOR: Dinwiddie Construction Co., San Francisco.

CAPUCHINO HIGH SCHOOL ADDITION —SAN BRUNO, SAN MATEO COUNTY: San Mateo Union High School District, owner; girls' gym and cafeteria and shop, $676,560. ARCHITECT: Masten & Hurd, San Francisco; reinforced concrete construction. GENERAL CONTRACTOR: Frank C. Brunelli, San Francisco.

NEW HIGH SCHOOL BUILDINGS—RENO, NEVADA: Reno School District #10, owner; 60 classrooms, gym, music shops and cafeteria, $2,458,632. ARCHITECT: L. A. Ferris & G. Erskine, Reno; 2 story; reinforced concrete construction. GENERAL CONTRACTOR: Nomellini Construction Co., Stockton.

AUTO SALES & SERVICE BUILDING—UKIAH, MENDOCINO COUNTY: Weber Buick Co., owner, $70,913. ARCHITECT: J. Clarence Felciano, Santa Rosa; 1 story; 60 x 130; concrete block; wood or structural steel roof trusses, plate glass front. GENERAL CONTRACTOR: Francies Construction Co., Santa Rosa.

CHURCH ADDITION—MODESTO, STANISLAUS COUNTY: First Methodist Church, owner; social hall and Sunday school, $85,990. ARCHITECT: G. N. Hilburn, Modesto; reinforced concrete and frame construction, tile roof. GENERAL CONTRACTOR: Acme Construction Co., Modesto.

NEW FOOTHILL GRAMMAR SCHOOL — HAYWARD, ALAMEDA COUNTY: Hayward Elementary School District, owner; 7 classrooms, office and toilet rooms, $124,512. ARCHITECT: Anderson & Simonds, Oakland. GENERAL CONTRACTOR: N. T. Lewis, Hayward.

THEATRE BUILDING — SAN JOSE, SANTA CLARA COUNTY: Lawrence Borg, owner; 900 seats and 2 stores, $159,027. ARCHITECT: A. A. & A. Mackenzie Cantin, San Francisco; reinforced concrete and frame construction. GENERAL CONTRACTOR: Lew Jones Construction Co., San Jose, $146,762. ELECTRICAL CONTRACTOR: Roy N. Butcher Co., San Jose, $12,265.

OFFICE BUILDING—SACRAMENTO, SACRAMENTO COUNTY: Robt. W. Draper, owner; $175,000. STRUCTURAL ENGINEER: H. M. O'Niel Co., Oakland; 1-story and mezzanine; 117 x 160; brick, reinforced concrete and frame construction. OWNER BUILDS AND AWARDS SEPARATE CONTRACTS.

BURNETT RECREATION CENTER — SAN FRANCISCO: City and County of San Francisco, owner; gymnasium and filed house, $300,000. ARCHITECT: W. G. Merchant, San Francisco; reinforced concrete and frame and stucco construction. GENERAL CONTRACTOR: Elvin C. Stendell, San Francisco.

CONSTRUCTION OF ST. MARY'S PLAYGROUND — SAN FRANCISCO: City and County of San Francisco, owner, $145,587. ARCHITECT: W. G. Merchant, San Francisco; reinforced concrete bleachers and convenience station; grading, paving and sprinkler system. GENERAL CONTRACTOR: Arthur W. Baum, San Francisco.

CLUB HOUSE BUILDING — SAN FRANCISCO:City and County of San Francisco, owner, $17,627. ARCHITECT: W. G. Merchant, San Francisco; frame and concrete block construction. GENERAL CONTRACTOR: Andrew Waechter, San Francisco.

PARISH HALL — REDWOOD CITY, SAN MATEO COUNTY: Redeemer Lutheran Church, owner, $53,000. ARCHITECT: Martin J. Rist, San Francisco; 1 story; frame and stucco construction. GENERAL CONTRACTOR: O. C. Moroney, Burlingame.

MARTIN MEMORIAL REHABILITATION BUILDING — SPRINGVILLE, TULARE COUNTY: Tulare-Kings County Joint Tuberculosis Hospital, owner, $52,800. ARCHITECT: Wm. D. Coates & Mourice J. Metz, Fresno. GENERAL CONTRACTOR: Egoian Construction Co., Tulare.

SWIMMING POOL — RIPON, SAN JOAQUIN COUNTY: Ripon Union High School District, owner; high school swimming pool, $36,269. ARCHITECT: Henry V. Chescoe, San Francisco; 40 x 82; reinforced concrete construction, tile scum gutter. GENERAL CONTRACTOR: Moore & Moore Construction Co., Stockton.

MORTUARY BUILDING — SAN PABLO, CONTRA COSTA COUNTY: Wilson & Kratzer, owner, $61,304. ARCHITECT: Donald L. Hardison, Richmond; 1 story; 9,000 square feet, frame construction, redwood exterior, concrete floor, radiant heating. GENERAL CONTRACTOR: Geo. S. Tandy & Son, Richmond.

MORTUARY BUILDING—OAKLAND, ALAMEDA COUNTY: Laurel Mortuary, owner, $70,000. ARCHITECT: Cecil S. Moyer, Oakland; brick veneer construction; frame and stucco. GENERAL CONTRACTOR: Geo. Warn & Son, Oakland.

BUENA VISTA GRAMMAR SCHOOL — WALNUT CREEK, CONTRA COSTA COUNTY: Walnut Creek Elementary School District, owner, $66,915. ARCHITECT: Dragon, Schmidts & Hardman, Berkeley; frame and stucco construction. GENERAL CONTRACTOR: Frank A. Payne & Son, Orinda.

BEN ALI GRAMMAR SCHOOL ADDITION —NORTH SACRAMENTO, SACRAMENTO COUNTY: North Sacramento Elementary School District, owner; 2 classrooms, kindergarten, office and toilet rooms. ARCHITECT: Koblik & Fisher, Sacramento; frame and stucco construction. GENERAL CONTRACTOR: United Construction Co., Sacramento.

RIVERSIDE HOTEL ADDITION — RENO, NEVADA: Riverside Hotel, owner; 48 rooms and baths, new dining room and kitchen, $1,099,648. ARCHITECT: DeLongchamps & O'Brien, Reno; 3 story and basement; reinforced concrete and some structural steel construction, 1 elevator, glass-in swimming pool. GENERAL CONTRACTOR: M. J. Brock & Sons, Reno.

APARTMENT BUILDING — MODESTO, STANISLAUS COUNTY: Dr. J. R. Avila, owner; 3 apartments, $30,000. ARCHITECT: G. N. Hilbrun, Modesto; 2-story frame and stucco construction. GENERAL CONTRACTOR: Jesse E. Wagoner, Modesto.

STORE BUILDING — MODESTO, STANISLAUS COUNTY: Mr. Leob, owner, $55,500. ARCHITECT: G. N. Hilbrun, Modesto; 1 story; 65 x 125; concrete block and reinforced concrete, wood roof, vitrolite and plate glass front. GENERAL CONTRACTOR: Cotner & Cotner, Modesto.

OFFICE, SALESROOM AND WAREHOUSE —FRESNO, FRESNO COUNTY: Leo J. Meyberg Co., owner, $100,000. ARCHITECT: Ward & Belles, San Francisco; 1 story 100 x 100; concrete block, structural frame, wood roof. GENERAL CONTRACTOR: Russell A. Cullen, Inc., San Francisco.

APARTMENT BUILDING — SAN FRANCISCO: Malcolm Bruce; 6 apartments, $98,680. ARCHITECT: Albert Henry Hill, San Francisco; 4 story; frame and stucco construction. GENERAL CONTRACTOR: Elvin C. Stendell, San Francisco.

STORE BUILDING—OAKLAND, ALAMEDA COUNTY: Moore's, owner, $450,000. ARCHITECT: Albert F. Roller, San Francisco; 3 and part 4 story; 62 x 150; Class A, rein-

forced concrete and structural steel construction. Indiana limestone and granite exterior, plate glass front. GENERAL CONTRACTOR: Dinwiddie Construction Co., San Francisco.

NEW HILL VIEW GRAMMAR SCHOOL — MENLO PARK, SAN MATEO COUNTY: Menlo Park Elementary School District, owner; 6 classrooms, kindergarten, office and toilet rooms. ARCHITECT: Arthur D. Janssen, Atherton; frame and stucco construction, some concrete block and structural steel. GENERAL CONTRACTOR: Howard J. White, Inc., Palo Alto.

NEW YOSEMITE GRAMMAR SCHOOL, LINDBERG GRAMMAR SCHOOL ADDITION —MANTECA, SAN JOAQUIN COUNTY: Manteca Elementary School District, owner; 7 classrooms, office and toilet rooms; 4 classrooms, $166,286. ARCHITECT: Mayo & Johnson, Stockton; frame and stucco construction. GENERAL CONTRACTOR: Moore & Mo,are, Stockton.

STOCKHOUSE BUILDING — SAN FRANCISCO: San Francisco Brewing Co., owner, $500,000. STRUCTURAL ENGINEER: Ray N. Moore, San Francisco; 5-story, 100x100; reinforced concrete and structural steel construction; 1 freight elevator, glazed tile partition, cork insulation, mastic floors. GENERAL CONTRACTOR: Cahill Construction Co., San Francisco.

SUNDAY SCHOOL BUILDING—SAN FRANCISCO: 9th Church of Christ Scientist, owner, $134,747. ARCHITECT: Henry H. Gutterson, San Francisco; 1 story; reinforced concrete construction, steel roof trusses, tile roof, steel sash. GENERAL CONTRACTOR: Joel Johnsan & Son, San Francisco.

STORE BUILDING — COALINGA, FRESNO COUNTY: Edmund B. MacDonald, owner, $71,000. ARCHITECT: Ed Musson Sharpe, San Francisco. ENGINEER: H. L. Marchand, San Francisco; 1 story; reinforced concrete construction. GENERAL CONTRACTOR: R. T. Dealy, Avenal.

BANK BUILDING REMODEL — MARTINEZ, CONTRA COSTA COUNTY: Bank of Martinez, owner, $120,000. ARCHITECT: E. Geoffrey Bangs, San Francisco; interior remodel. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

RECREATION BUILDING — PARADISE, BUTTE COUNTY: L.Lippow,owner,$46,000. ARCHITECT: Leonard H. Ford, Walnut Creek; 1 story; 100 x 160; brick walls, wood roof trusses. GENERAL CONTRACTOR: Modern Building Co., Chico.

HIGH SCHOOL ADDITION—QUINCY, PLUMAS COUNTY: Plumas County Union High School District, owner; 6 classrooms, gym, offices and boiler house, $385,500. ARCHITECT: Thomson & Evans, Oakland; structuran steel frame and frame and stucco construction; boiler house: reinforced concrete construction. GENERAL CONTRACTOR: Pacific Co., Oakland.

BANK BUILDING ADDITION & REMODEL — AUBURN, PLACER COUNTY: Placer County Bank, owner, $45,000. ARCHITECT: Rudolph Igaz, San Francisco; 2 story; reinforced concrete and frame construction. GENERAL CONTRACTOR: John G. Piches, Roseville.

GRAMMAR SCHOOL ADDITION — SAN ANDREAS, CALAVERAS COUNTY: San Andreas Elementary School District, owner; 4 classrooms and toilet rooms, $61,612. ARCHITECT: Geo. C. Sellon, Sacramento; frame and stucco construction. GENERAL CONTRACTOR: Swendeman & Sons, Angels Camp.

ADMINISTRATION BUILDING. REMODEL FROM SCHOOL BUILDING — SACRAMENTO, SACRAMENTO COUNTY: Sacramento Board of Education, owner, $184,480. ARCHITECT: Chas. F. Dean, Sacramento; SUPERVISING ARCHITECT: Harry J. Devine, Sacramento; interior and exterior remodel. GENERAL CONTRACTOR: Chas. F. Unger, Sacramento.

NEW JACKSON GRAMMAR SCHOOL — SAN JOSE, SANTA CLARA COUNTY: Alum Rock Union Elementary School Dist., San Jose: 15 classrooms, kindergarten, office and toilet rooms, $165,765. ARCHITECT: Kress & Gibson, San Jose, San Jose; frame and stucco construction. GENERAL CONTRACTOR: Geo. J. Lauer, San Jose.

STORE BUILDING—EUREKA, HUMBOLDT COUNTY: C. R. Barnum, owner, $41,273. ARCHITECT: Albert R. Williams, San Francisco; 1 story and mezzanine; 60 feet wide; laminated wood construction, wood roof trusses. GENERAL CONTRACTOR: Glen Nash, Eureka.

CONVENT — SANTA ROSA, SONOMA COUNTY: Sisters of St. Joseph, owner, $80,000. ARCHITECT: Frank C. Georgeson, San Francisco; frame and stucco construction. GENERAL CONTRACTOR: Barrett & Hilp, San Francisco.

MAIN FIRE STATION. SUB-STATION FIRE HOUSE — WOODSIDE, SAN MATEO COUNTY: Woodside Fire District, owner. Woodside Road, $57,013; Emerald Lake District, $19,144. ARCHITECT: Furber Libby & Morgan Stedman, Palo Alto; Main station, 1 story; reinforced concrete and frame, redwood exterior; sub-station, frame and redwoo dexterior. GENERAL CONTRACTOR: S & Q Construction Co., Main Station, San Francisco; Sundquist Bros., sub-station, Menlo Park.

ACOUSTI-CELOTEX

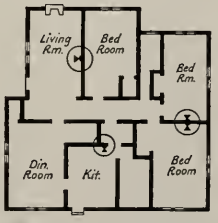
...the Best Known Name in Sound Conditioning ...brings the Comfort of Priceless Quiet and Better Hearing

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Blueprint for modern homes— Extra outlets, concealed wiring



Signs of a thoughtful builder are the convenient telephone outlets included in his blueprint. Here the customer may add new extensions in the kitchen and bedrooms later on as they are needed... inexpensively. These outlets also may be used for portable telephones.

Beautiful walls won't be marred by exposed wiring if built-in conduit is planned in advance. Low-cost, concealed wiring is easy to install, means extra customer appreciation. *For free help in planning, call your local Pacific Telephone office and ask for "Architects and Builders Service."*

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

IN THE NEWS

ICE CREAM STORES

The Zesto Dairy Products Company of Lodi, California, have awarded a contract to the Wm. Stath construction company of San Leandro, for the construction of a group of 90 ice cream stores in Alameda, Contra Costa, and Santa Clara counties.

The stores will cost about $8,000 each and will be of concrete block, frame, and stucco construction.

NEW WELFARE BUILDING

Robert W. Draper of Sacramento has started construction of a one story and mezzanine, reinforced concrete and frame construction building in Sacramento which will be occupied by the California State Welfare Department when completed.

The building will be 117 ft. x 160 ft. and cost approximately $175,000. H. M. O'Neil Company of Oakland are the structural engineers.

NEWSPAPER BUILDING

The McClatchy Newspapers have awarded a contract to the Lockwood Greens Engineers, Inc., of Rockefeller Plaza, New York City, for the construction of a 1-story and basement press room, stereotype foundry and mail room building in Sacramento.

PRESIDENT RESIDENCE

The Fresno State College Foundation has let a contract to the Taylor & Wheeler Construction Company of Fresno (California) for the construction of a 10-room, brick and frame with shingle exterior, residence to be occupied by the president of the Fresno State College.

Cost of the building is estimated at $42,000.00.

MEDICAL DENTAL BUILDING

Architects Anderson and Simonds of Oakland are working on a 5-story, 50' x 125', reinforced concrete building in Oakland for the Cameron Medical Company.

Estimated cost of the building is $400,000.

STATE OFFICE BUILDING

The State of Nevada is planning the construction of a new two story and basement, reinforced concrete, brick veneer, building in Carson City to be used as a state office building.

The cost of the building will approximate $800,000. Perry Means, architect, of Reno is drafting plans.

HALVORSEN APPOINTED

George Halvorsen, connected with the builders' hardware industry for many years, has been named to the position of general sales manager for the Westwood Manufacturing Company of Los Angeles.

He was formerly assistant sales manager of the Schlage Lock Company, San Francisco.

ZONING PERMIT GRANTED

The city of Fresno (California) has granted a permit to the Producers Cotton Oil Company, same city, for the construction of a cotton seed storage building to be built near the Southern Pacific tracks.

Cost of the warehouse is estimated to be $50,000.

RIVERSIDE HOTEL ADDITION

The famous Riverside Hotel in Reno, Nevada, will be enlarged by the construction of a 48-room and bath addition at a cost of $1,099,648, according to architects DeLongchamps & O'Brien of Reno.

Contemplated improvements include a new dining room and kitchen, and a large glassed in swimming pool, as well as the additional rooms.

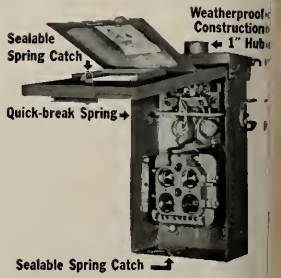
AWARDED CONTRACT FOR A CATALYTIC CRACKING UNIT

The Salt Lake Refining Company, Salt Lake City, has awarded the Bechtel Corporation of San Francisco, a contract for the design and construction of a new catalytic cracking unit at the Salt Lake refinery.

Estimated to cost $10,000,000 the "Houdriflow Process" cracker will process crude oil from the Rangely, Colorado, oil fields.

WEATHERPROOF SWITCH

A new weatherproof switch primarily designed by the GENERAL SWITCH CORP'N, Brooklyn, New York, for outdoor use on buildings requiring a 30 amp. capacity service entrance switch in combination with four plug fuse branch circuits.



Rainproof cabinet protects interior mechanism. Used on residences, athletic fields, parking lots, open air theatres, and for other types of branch lighting.

PROJECT POSTPONED

Construction of the massive Golden Gate Gardens sports auditorium and ice skating rink in San Francisco has been postponed for the time being, according to Geo. Campbell, vice president and general manager of Winterland Corporation, sponsors of the project.

The construction cost will exceed the $1,000,000 mark according to W. D. Peugh architect, who has drafted preliminary plans for the reinforced concrete and structural steel building.

NEW BUS DEPOT

Plans are under way for the construction of a new $200,000 Pacific Greyhound Bus Depot in Reno, Nevada, according to architect E. Keith Lockard of Reno.

The building will be of 1 and 2-story reinforced concrete construction and will contain a restaurant, waiting room, ticket office and dormitories.

JUNIOR HIGH SCHOOL ADDITION

—MARTINEZ, CONTRA COSTA COUNTY: Alhambra Union High School District, owner; music room, exercise room, art room, cafeteria, shop and toilet rooms, $182,114. ARCHITECT: John Lyon Reid, San Francisco; reinforced concrete; structural steel and frame and stucco construction. GENERAL CONTRACTOR: V. P. Kaufenberg, Martinez.

NO FLOODLIGHTING

The Woodland Board of Education has rejected bids for floodlighting the Woodland (California) High School football field.

STOLTE INC.

General Contractors

—:—

OAKLAND · CALIFORNIA

STATIONERY
SCHOOL & OFFICE
SUPPLIES
•
Printing Engraving
Announcements
•
CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

CRITICAL CLIENTS PREFER—

CABOT'S COLLOPAKES

32 Lively Colors — No Adulterants Are Used

CABOT'S patented COLLO PAKING process results in a durable, Porcelain-Smooth Surface—Stays Clean—Resists the elements for years.

Write for color card, showing 32 colors.

GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

MULLEN MFG. COMPANY

—

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

—

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO - SACRAMENTO
OAKLAND - LOS ANGELES - DENVER

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

Fine ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO, 11

Teams will have to do their playing in daylight hours, or else.

NEW VACUUM BREAKER

A new vacuum breaker for protection against back siphonage, only 2⅜" in overall height, has been announced by the CHICAGO FAUCET Company, Chicago, Ill.

The valve mechanism consists of a shallow cup with flexible disc mounted above and below it. Any flow of water lifts the valve assembly into a tight seal; no spitting, no obstruction to flow, allows full capacity of pipe. Solid brass, chrome plated. Easy to service, and install.

NEW MODEL BLOWER TYPE AUTOMATIC AIR CONDITIONER

A new model blower type, gas fired, automatic air conditioner has been announced by the HENDERSON FURNACE & MFG. CO., of Sebastopol, California. Smallest of the Henderson line it has a 60,000 B.T.U. imput capacity and is intended primarily for heating smaller homes, with or without basement.

Featured is the compact cabinet size, and placement of vent at top, front, permitting installation at minimum space; close to rear and side walls if desired, or small closet or corner.

Economical to install, service and operate. Catalog available.

HOUSE OF STUDIES BUILDING — OAKLAND, ALAMEDA COUNTY: Dominican Fathers, owner, College of Saint Albert the Great, $454,117. ARCHITECT: Arnold S. Constable, Sausalito; 3 story; L-shaped building, reinforced concrete and frame construction, slate roof. GENERAL CONTRACTOR: John F. Tullock, Oakland.

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING • PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard

Interior Trim — Gutters

Special Moldings

The place to SAVE

is

LUMBER MANUFACTURING CO.

225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

Subscribe Now —

ARCHITECT and ENGINEER

$3.00 Per Year

Index to Advertisers

ARCHITECTS Reports ..... Inside Back Cover
BAXTER & Company, J. H. 36
BURKE, W. J. & Co. ..... *
CLARK, N. & Sons ..... *
CLASSIFIED Advertising 43
CENTER Stationery 46
CLINTON Construction Company 38
CONTINENTAL Water Heater Co. 29
DETROIT Steel Products Co. 5
DINWIDDLE Construction Co. ..... 23 & 47
DUFFY Tile Co. 48
FORDERER Cornice Works 39
FULLER, W. P. Co. ..... *
GLADDING, McBean & Co. ..... *
GUNN, Carle & Company 46
HANKS, Inc., Abbott A. 48
HAWS, Drinking Faucet Company 26
HENDERSON Furnace Co. 32
HERRICK Iron Works 47
HOGAN Lumber Company 38
HUNT, Robert W., Company 48
HUNTER, Thos B. 47
JOHNSON, S. T. Co. 30
JUDSON, Pacific-Murphy Corp. 39
KNAPP, Ariss Co. 24
KRAFTILE Company 28
KYLE & Co. 40
LUMBER Manufacturing Co. 48
MARBLE Institute of America 2
MATSON Electricial Equipment Co. 21
MATTOCK, A. F. Co. 48
McGREEVY, J. T. & Co. 25
MICHEL & Pfeffer Iron Works ..... 5 & 6
MILLER Company, The ..... *
MOHR, J. H. Co. 27
MULLEN Mfg. Co. 47
NORTHERN California Electric Bureau 35
PACIFIC Clay Products Co. ..... *
PACIFIC Coast Gas Association ..... Inside Front Cover
PACIFIC Manufacturing Company 33
PACIFIC Portland Cement Company ..... Back Cover
PACIFIC Telephone & Telegraph Co. 45
PITTSBURGH Testing Laboratory 48
POOR Richard Engraving Co. 47
REMILLARD-Dandini Co. 48
REPUBLIC Steel Corporation 33
RUANE, Patrick J., Inc. 24
SCOTT Co. ..... 27 & 47
SECURITY Valve Company ..... *
SIDEWALL Lumber Co. 38
SIMONDS Machinery Company 33
SISALKRAFT Company 38
SMOOT-Holman Co. 37
SOULE Steel Co. ..... *
STANLEY Works, The 31
STEELFORM Constructing Co. 22
STOLTE, Inc. 46
SWINERTON & Walberg Co. 47
TAYLOR Co., Halsey W. ..... *
TORMEY Company, The 47
U. S. Bonds 1
VERMONT Marble Company 33
WESTERN Asbestos Co. 45
WOOD, E. K. Lumber Company 36

*Indicates Alternate Months

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company

ENGINEERS

Inspection - Tests - Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

TILE CONTRACTORS

Shower Doors, Tub Enclosures
Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

253 Minna St., S. F. YUkon 6-1489

DUFFY TILE CO.

ARCHITECT AND ENGINEER

DELTA-MENDOTA PUMPING PLANT and INTAKE CHAN

CENTRAL VALLEY PROJECT—U.S.B.R.

OCTOBER 1949

Ceramic Veneer provides durability and beauty for Prudential

Wurdeman & Becket, Architects
Wm. Simpson Construction Co., General Contractor

The Prudential Insurance Company made Gibraltar its symbol of permanence. It is appropriate that its new Western Home Office in Los Angeles has Ceramic Veneer facing the horizontal wings. This machine-perfected terra cotta...with its warm, nonfading color...its modern reeded surface...its resistance to soiling...is also durable and permanent.

Not only in Los Angeles but in *all* the principal Pacific Coast cities, you'll find the majority of larger buildings faced with Ceramic Veneer. Many smaller buildings, too. Its versatility makes Ceramic Veneer ideal for store fronts and modernizing. You are invited to investigate the various ways Ceramic Veneer can serve you and your clients.

75 YEAR

CERAMIC VENEER IS A GLADDING, McBEAN & CO. PRODUCT

Other quality ceramic products include Hermosa Tru-Joint Tile, Face Brick, Roof Tile, Floor and Patio Tile, Refractories, Flue Lining, Vitrified Clay Pipe, Franciscan Earthenware and Franciscan China.
Offices at Los Angeles • San Francisco • Portland • Seattle • Spokane.

• ARCHITECT AND ENGINEER

Vol. 179 No. 1

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS, A.I.A.
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

One of the West greatest engineering and construction works is the Central Valley Water Project of the Sacramento and San Joaquin Valleys in northern and central California. Shown here is a portion of the $3,000,000 Intake Channel and the Tracy Pumping Plant for the Delta Mendota Canal. See story on Page 18.

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

OCTOBER

EDITORIAL NOTES 4

NEWS & COMMENT ON ART 6

VERMONT MARBLE COMPANY, Historic Record as Western Business . . 8

MOVABLE SCHOOL ROOM SOLVES REGION'S HEADACHE, Tacoma, Washington 10
ERNEST T. MOCK, NELSON J. MORRISON, Architects
By ARTHUR W. PRIAULX

INVITATION, California Council of Architects Convention 16
Palm Springs, November 6-9

GLYCERINE IN MODERN BUILDING MATERIALS 17
By MILTON A. LESSER

A DARING ADVENTURE IN WESTERN CONSTRUCTION—Stoite . . 18

A.I.A. ACTIVITIES 30

WITH THE ENGINEERS 32

PRODUCER'S COUNCIL PAGE 34
Edited by J. WILSON PEELE

HEADLINE NEWS & VIEWS 36
By E. H. W.

IN THE NEWS 37, 40, 46

BOOK REVIEWS, Pamphlets & Catalogues 39

ESTIMATOR'S GUIDE, Building & Construction Materials 41

BUILDING TRADES WAGE SCALES, Northern, Central & Southern California 43

CONSTRUCTION CONTRACTS AWARDED, General Data 44

ADVERTISERS INDEX 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Pemberwood; Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6505 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy 50c. ARCHITECTS' REPORTS are published daily from this office, Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

EDITORIAL NOTES

BIG BUSINESS

"You still hear a politician occasionally lambasting 'Wall Street' and blaming the country's ailments on the evil workings of the 'big interests,' but by and large the American people nowadays accept—and often even defend—big business as being good citizens. Most big businesses work hard at earning and keeping that kind of a reputation. They know it's good business to be good citizens, not only in their individual enterprises but in associations. An example of the latter just comes to light in the annual report of the Advertising Council, Inc. This is a private, non-profit, non-partisan organization, supported and operated by advertisers, ad agencies and media groups for the purpose of 'utilizing advertising in the solution of national problems.'

"That's certainly a noble enough purpose, and the Council's report on its work the last year indicates it has pursued that goal diligently. Top brains, skill, time and a great deal of money have been poured by it into: promoting better understanding of the American economic system at home; fighting anti-American lies overseas; promoting CARE packages; pushing the recruitment efforts of the armed services; campaigning for natural resource conservation; combating racial and religious bigotry, and many other activities, all contributing to the strength and well-being of the nation."—Reynolds Knight.

* * *

"England and other countries are making much of the dollar shortage—most American citizens are suffering from the same ailment, particularly after paying taxes."

* * *

HOME BUILDING IN HIGH GEAR

Records will show that during the first six months of this year, the home builders of this country started in excess of half a million new homes and apartments and the totals for the year should exceed 1948.

Final records will be governed somewhat by action of Congress in connection with the government housing program — no down payment for veterans, and dropping mortgage on rentals 10 per cent, may alter the final tabulations.

* * *

As the Federal government starts spending some two Billion dollars of borrowed money annually on public housing construction, a rise of from 5 to 15 per cent in building costs for the private home buyer may be expected—due to governmental competition for labor and materials, and possibilities in scarce products wherein the private users will come out second best in the bidding.

* * *

VETERANS HOME OWNERSHIP

Recent information made available to those interested in the housing situation of our nation indicates that the ownership of a home has been a successful venture for more than a million and a half veterans of World War II who have taken advantage of Veteran's Administration loans as a factor in the purchase of a new home.

Already more than eight and a half billion dollars have been obtained from the VA for such purposes.

From the VA standpoint the venture has been quite satisfactory as some seventy thousand veterans have already paid off their loans in full, and only eighteen out of every one thousand ex-GI home buyers lag behind on any of their monthly payments. The majority of those who do get behind in their payments manage somehow to catch up without defaulting.

It is interesting to note that default claims have had to be paid on only three out of every one thousand home loans, which is certainly a pretty good average. It is also rather interesting to note a recent upturn in loan guarantee applications since recent authorization of the Federal government's secondary market which makes considerably more funds available for lending to veterans.

* * *

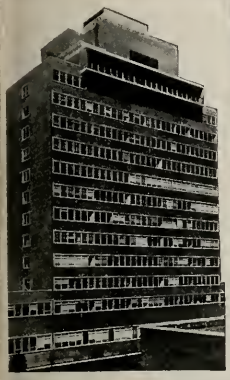
The total amount of home mortgages being paid off by private families is in excess of thirty-four and a half billion dollars, which is almost equal to the total Federal public debt in 1935.

* * *

CALIFORNIA COUNCIL OF ARCHITECTS CONVENTION

The Annual Convention of the California Council of Architects has been scheduled for November 6-7-8-9, at Palm Springs, and preliminary announcements issued by various committees in charge of the event indicate the conference will be outstanding among the long list of highly successful conventions held by California architects.

This is an opportunity for every architect to improve his business, his knowledge of today's professional problems, and his relationships with his fellow man.



Whatever the type of building...

Whatever its window requirements...

You can build for distinction and keep costs low by specifying

FENESTRA

Fenestra* Fencraft Windows are made of high-quality casement sections of advanced design—fabricated into 51 different projected windows, 14 casement windows and 36 combination windows. Each good looking, finely made . . . and economical, because Fenestra's standardization plan permits volume production. For full information, see Sweet's Architectural File, section 16a/13, or write Detroit Steel Products Co., Dept. 2262, AE 10, 1310-63rd St., Emeryville, Oakland 8, Calif.

*®

Fenestra

FENCRAFT STEEL WINDOWS
FOR BETTER BUILDINGS

NEWS AND COMMENT ON ART

CITY OF PARIS

The City of Paris, San Francisco, has scheduled the following exhibits and activities in the Rotunda Gallery for the month of October.

An exhibition of Portraits in Paint and Sculpture by Ruth Cravath of San Francisco, and a group of Watercolors by Dan Lutz and Millard Sheets of Los Angeles.

The Pictures of the Month in the Rotunda Gallery will feature a group of Prints and Water Colors by Dorr Bothwell.

CALIFORNIA SCHOOL OF FINE ARTS

The California School of Fine Arts will enter its 76th year of operation this Fall with a program in the field of specialized education resulting from more than 75 years of experience.

That the school is ever expanding in its scope is evidenced from the fact that the new term will see students from the east, middle west, the northwest, and abroad enrolled.

The fundamental structure of the curriculum which has proved its worth during the past four years will be maintained, with no major changes taking place in the variety of intensive courses offered under the three departments of Painting, Sculpture, and Graphic Arts, Design for Commerce and Industry, and Photography.

Two new courses addressed primarily to high school teachers will be introduced in the night school. Ernest Mundt will conduct a class in workshop methods, and Sidney Peterson will conduct a class in film production techniques. Another new service which has been added is a Saturday morning class for junior and senior high school students in Pre-professional Training in Art. This class will be conducted by Hassel Smith and Jeanne Kewell.

Augmented ceramic classes under the direction of Whitney Atchley and Hal Riegger, and enlarged Interior Design classes under Maurice Sands, are also being offered.

ANNUAL EXHIBITION

The Annual National Gold Medal Exhibition, sponsored by The Architectural League of New York regularly until 1938 and then suspended, has been revived this year on the initiative of Chester B. Price, president of the League.

Architects, artists, and designers throughout the country are invited to contribute their best work executed since 1938 for a preliminary series of monthly shows, beginning the latter part of November. A distinguished professional jury will choose the highest quality exhibits from each show for the 53rd Annual Gold Medal Exhibition, scheduled for early in the Spring at the League headquarters. The public is invited to attend the monthly shows and the Gold Medal Exhibition.

Entry forms may be secured from the League headquarters, 115 East 40th Street, New York.

OAKLAND ART SHOW

The Oakland Art Gallery is holding its Seventeenth Annual Exhibition of Water Colors and Pastels, Drawings and Prints this month, with the exhibition closing on November 6th.

Three juries of artists will judge every work submitted. The juries are: 1. Conservative; 2. Intermediate; and 3. Radical. All cash prizes are being donated by Mrs Adele Hyde Morrison.

UNION SQUARE ART EXHIBIT

The recent art exhibit in Union Square, San Francisco, was acclaimed an outstanding success this year, with a large number of artists and exhibitors taking part in the open air show, and the public responding very favorably.

NATIONAL SCULPTURE SOCIETY

The National Sculpture Society, 1083 Fifth Avenue, New York, has announced a national competition in Ecclesiastical Sculpture for exhibition early in the Spring of 1950.

The objective of the competition is a desire to bring forth original and vital designs as well as spiritually stirring symbols of Faith in the field of Ecclesiastical Sculpture, and any subject pertaining to the Life and time of Christ and persons or episodes associated therewith are eligible for entry.

Entries should be submitted in any permanent material, and should not exceed 18" in their greatest dimension, and not more than three entries will be accepted from any one person.

The contest is open to sculptors working in the United States and awards ranging from $100 to $1000 will be made.

PUBLIC DISAGREE WITH FAIR ART JUDGES

Visitors at the recent California State Fair disagreed with the art judges in the awarding of prizes during the Fair, with more than 6,000 ballots being cast by the public.

Most popular public painting was an oil by Emil J. Kosa, Jr. of Los Angeles entitled "The 49'er." the most popular water color was "The Lion Dance" by Mun Woy Lee of San Francisco, and the most popular print with the public was "The Pass" by Howard E. Smith of Carmel.

None of the paintings or prints which the public

liked best received a prize or honorable mention by the judges.

FRENCH SCHOOL OF FINE ARTS

An important step opening the way for graduates of American schools of architecture to be admitted to the renowned French school of fine arts, the Ecole des Beaux-Arts has been announced by The American Institute of Architects.

In cooperation with Julian C. Levi, New York, chairman of the Committee on International Relations of the A.I.A., selected graduates of American schools may now be admitted by Beaux-Arts without examination. The new conditions "reflects international recognition of the high standing of architectural education in the United States," Levi declared.

ART AND LITERARY WINNERS

The Board of Trustees of the Albert M. Bender Memorial Trust Fund and the Board of Directors of the San Francisco Art Association have announced the names of the four winners of the Albert M. Bender grants-in-aid in the fields of the art and literature for the 1948-49 season.

John Hultberg and George Stillman have been selected in the field of art, and Harry Muheim and James Warnock in the field of literature. Each carries an award of $1200 to aid in continuing the recipients creative work.

M. H. DE YOUNG MEMORIAL MUSEUM

Walter Heil, director of the M. H. de Young Memorial Museum in Golden Gate Park, San Francisco, has announced the following exhibitions and events for the month of October:

EXHIBITIONS: 10th Annual Exhibition of Art by Society of Western Artists; Painting by Chang Shu-Chi and other Contemporary Chinese artists; A Trip to Guatemala and Mexico (Oils) by Antonio Sotomayor; Elizabeth Keith, Color Prints of the Orient; 1949 International Exhibition of Photography by California Camera Club; Thirty Paintings, by Stuart Davis, Yasuo Kuniyoshi and Franklin Watkins, and Japanese Color Woodcuts, lent by William C. Hartnett.

METART GALLERY EXPERIMENT IN NON-COMMERCIAL EXHIBITIONS

Much interest has arisen over the newly formed Metart Gallery in San Francisco. The Gallery is run by 12 artists, several of whom are School students and artist members of the S. F. A. A. Each artist has the entire exhibition space for one month, allowing a full non-commercial showing of his work. The Gallery also has a Patron Membership Plan open to all interested parties.

Those having already exhibited their work are: Ernest Briggs, William Huberich, Jeremy Anderson, Hubert Crehan and, currently, W. Cohantz. Scheduled for future shows are: Jack Jefferson (October), Jorge Goya (November), Zoe Longfield (December), Kio Kiozumi (January), Edward Dugmore (February), Horst Trave (March), and Frann Spencer (April).

Gallery views of Jeremy Anderson's one-man exhibition

Illustrations through courtesy San Francisco Art Association

VERMONT MARBLE CO. HAS HISTORIC RECORD AS WESTERN BUSINESS

Some sixty-five years ago, when the State of California was young and the West Coast comparatively undeveloped, G. Landon, Jr., and Charles A. Field, two hearty pioneers in the construction industry, opened the first offices in San Francisco for the sale and distribution of Vermont Marble.

Acting as managers Landon and Field conducted the sales offices for what was then known as the Producers Marble Company, it being in reality a partnership combination representing the Vermont Marble Company, Dorset Marble Company, Sheldon & Sons, Ripley Sons, and Gibson & Woodfinall Vermont Marble producers.

Representing a merger of the Southerland Falls Marble Company and the Rutland Marble Company, the company was originally organized as a New York Corporation in 1880 by Governor Redfield Proctor, who was then the Governor of Vermont.

As there were several other important marble concerns active in Vermont at the time, and to meet a very competitive sales and distribution problem, Governor Proctor formulated the Producers Marble Company in 1883 to handle the sales of the five marble producers.

To give the group complete national distribution and sales representation and to better serve the builder, offices were opened in San Francisco, and thus direct representation of the Vermont Marble business, and later the product itself, followed the historic trail of the miner of the gold rush of 1848-49 to California.

When the corporate franchise of the Producers Marble Company expired by limitations on December 31, 1887, the San Francisco organization

became identified as the Vermont Marble Company and opened its own branch at 244 Brannan street, a site which it occupied until 1932 when new offices and plant facilities were developed and the old buildings were razed and the land sold.

During the famous earthquake and fire of 1906 which resulted in the destruction of a large part of San Francisco, the Brannan street plant and office was partially destroyed.

With renewed determination and zeal an enthusiastic people soon rebuilt San Francisco, and with the reconstruction of the city began one of the greatest periods of commercial and building expansion on the Pacific Coast. The Vermont Marble Company to keep pace with the growth of the Golden West opened offices in Portland, Oregon, and Vancouver, B. C., and a plant at Tacoma, Washington, where much of the marble quarried in the Alaskan properties was finished. These offices and plants have since been disposed of.

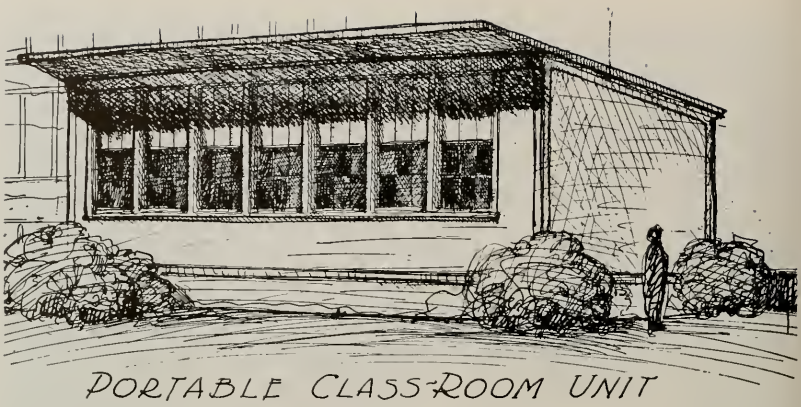
In 1926 the company opened a sales office in Los Angeles, now located at 3522 Council street. The three story wooden building at 244 Brannan street, originally intended as a temporary structure, served as the office and plant until the summer of 1932, when the office was moved to its present location in the Underwood Building, San Francisco, and the new manufacturing plant was opened at 6000 Third street. The new plant is said to be one of the most modern marble plants west of the Mississippi River and is completely equipped for handling blocks and full size sawn slabs of domestic and imported marbles for finishing into monumental and building purposes, and distributing throughout the West. Perhaps the largest shipment of marble blocks ever to reach San Francisco in one shipment was 1,420 tons from Alaska on the steamer Wilmington in July 1915.

The territory served by the San Francisco office, under the direction of H. C. Fassett, manager, takes in the territory west of the Rocky Mountains, including British Columbia, the Territory of Alaska, and the Hawaiian Islands.

Some of the outstanding buildings and monuments featuring Vermont and imported marble include:

I. Magnin Stores, San Francisco, (Exterior and Interior) Los Angeles, Beverly Hills; State Capitol (Interior), Olympia, Washington; State Capitol (Exterior), Salem, Oregon; Standard Oil Company of California (Exterior), San Francisco; Alexander & Baldwin Building, Honolulu; Forest Lawn Mausoleum (Interior), Glendale, California; Holy Cross Mausoleum (Interior), Colma, California; Cypress Lawn Catacombs & Columbarium (Interior), Lawndale, California; Luhrs Building (Interior), Phoenix, Arizona; and the Spokane County Court House (Interior), Spokane, Washington.

Carnation red granite was supplied for the exterior of the Carnation office building in Los Angles, and Swedish Imperial red granite for some of the Pacific Tel. & Tel. Buildings.



PORTABLE CLASS-ROOM UNIT

TACOMA, WASHINGTON

MOVABLE SCHOOL ROOM SOLVES REGION'S HEADACHE

ERNEST T. MOCK
NELSON J. MORRISON
Architects

By ARTHUR W. PRIAULX

A portable schoolroom which can be built and completely outfitted for $7,000 and which combines all of the conveniences and comforts of the most modern schoolroom may well solve the massive headache which today plagues many school boards in the West.

Designed by Ernest T. Mock and Nelson J. Morrison, architects for Tacoma, Washington school board, the compact, durable, inexpensive stopgap portable schoolroom can be built in a matter of weeks and provides teaching space at once at low cost while more expensive permanent facilities are being constructed.

Tacoma is typical of western communities with

an estimated population today of 200,000 people compared to 110,000 in 1940. Even though the school district has under construction or completed some $3,444,000 worth of permanent buildings and additions to older plants, it still lags far behind the demand created by the unprecedented expansion of its people. Some day the school officials hope to catch up with the demand and have on drafting boards or planned another $4,000,000 worth of buildings. But their problem is a current one, like most other western districts. What to do with the children who need schooling today?

Most California, Oregon and Washington school plants are bulging and overflowing with nearly two million new students, the end product of one of the greatest mass migrations in history. Since 1940 these three Pacific Coast states have gained some five million new people, nearly fifty per cent increase in less than ten years.

All over the West it is the same. In the eleven far western states the average gain in population since 1940 has been thirty-one per cent. School facilities are crowded beyond belief in many areas and two-shift teaching has been resorted to in some localities, making double use of schoolrooms.

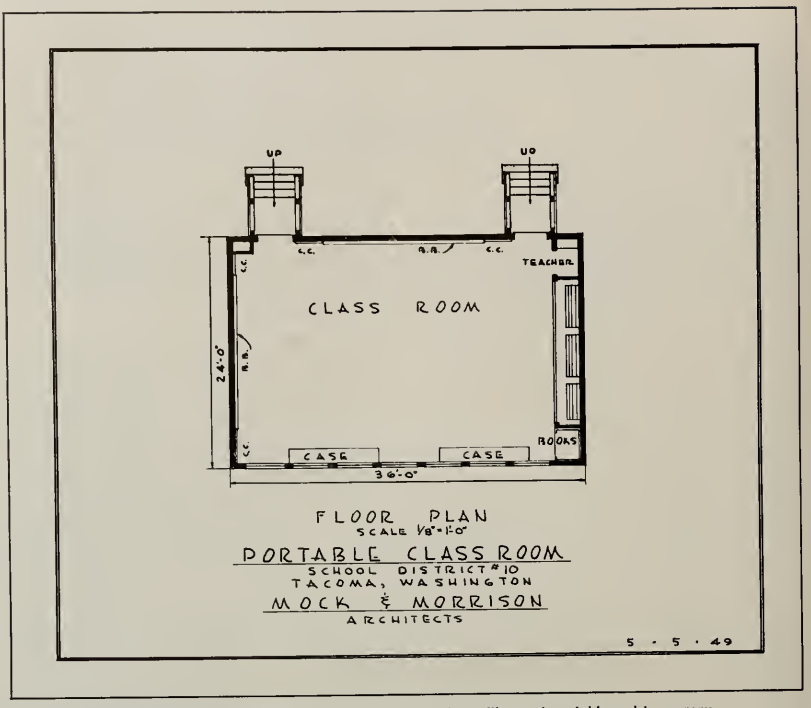
Architects Mock and Morrison this year saw they couldn't begin to provide enough permanent school buildings soon enough to care for Tacoma's rapid expansion and meet immediate school needs for the first of the war babies now coming of school age, and children of new comers.

Their problem resolved itself into designing the least expensive type of structure that would do the job in a stopgap capacity and yet avoid any shack-town, flimsy, unsafe buildings that could become an eye-sore in a year or so. It was not an easy assignment.

Six schoolrooms were needed at once in various parts of the city to augment existing buildings. School authorities wanted single rooms designed so they could be readily moved without damage for they found that over-crowded conditions changed from year to year as new subdivisions were opened and residential areas built up.

Mock and Morrison created their basic design for the portable schoolroom on the theory that the room should combine all of the most modern im-

MOVABLE CLASSROOMS fit snugly against parent building giving the feeling to students and teachers of "belonging." Principal Roy Cruver of Franklin Grade School in Tacoma is proud of this addition to his school plant.



FLOOR PLAN of Tacoma's portable school room which unlike most portable and temporary school structures, has style and fits into most plants, which is an important consideration in the event the building has to become a semi-permanent part of the district's school buildings.

provements in lighting, student and teacher comfort, acoustics, adequate blackboard and bulletin board space and heating. Even though portable and in theory only temporary, the architects decided the movable rooms should be decorated as tastefully and with as much attention to beauty and relief from eyestrain as in any permanent schoolroom. This attention to detail may have been prompted by the fact that Tacoma, like many other western communities, is still using "temporary" school portables erected after World War I.

The Mock and Morrison-designed Tacoma portable schoolroom is a complete teaching unit, twenty-four by thirty-six feet in size. It is a frame structure built around a frame of two-by-six studs. Exterior walls are of plywood and interior walls are of half-inch plywood. A new type plastic blackboard, in green and white colors, has been mounted all along two walls. Cork bulletin boards cover areas above the blackboards and all doors.

To provide maximum safety two exit doors have been installed at opposite ends of the school-

TWO EXIT DOORS in each classroom give maximum safety in case af emergency as shown here. Raaf ventilators are also shown, and the cement block chimneys can be taken down without waste when the building is moved.

MARY LYONS GRADE SCHOOL has two mavable units. Overhead lighting system is shown. Wardrobes da double daty as storage space for wraps of students and doors are cork covered to provide extra bulletin space. Built in on right of wardrobes and beneath wall of windows are utility spaces which give every facility enjoyed by students in most modern classroams.

Photos by

Art Forde

Fred Carter

room on the same wall opposite from a full wall of windows. Lighting is provided by a full wall of seven 8-foot tall windows and this side of the movable structure is protected outside with a three-foot overhang of the shed-type built-up mineral roof. The movable rooms are set on foundation stones at safe intervals.

Floors are made up of two-by-twelve joists covered with heavy plywood and overlaid with asphalt tile flooring. Ceilings are covered with accoustical tile and provide perfect sound conditions in the room. Three rows of florescent lighting ceiling fixtures extend the full length of the room.

A six-door wardrobe at one end of the room gives every child in the room adequate storage facilities for outer garments. On the same side of the room is a teacher's closet and a glass-enclosed bookcase with two filing drawers below, beneath the windows and extending the full length of the room are built-in cases for work projects with storage shelves, enclosed bookcases, and drawers for supplies.

Heat for all of the six movable rooms in Tacoma is provided from large individual oil heaters which are more than adequate in the coldest weather. In case it is desirable to use the rooms for several years the architects believe it would be wise to hook up the portable with the central heating plant for the movable rooms are generally located adjacent to the parent school building. Only handicap or disadvantage to this room is that students must go to the main school building for toilet facilities.

The roof section is insulated and ventilation vents installed in two places beneath the overhang to prevent dry rot and moisture accumulation, and condensation. Two gravity ventilators atop the roof at the low end facilitate a flow of pure air into the room as the used air is withdrawn.

From within, the movable room looks like any typical classroom in the most modern school building. It is pleasingly decorated in soft, pastel colors and matching drapes along the windows add to the general effect. The room accommodates thirty pupils without crowding. Typical reaction to the portables was found at Franklin Grade School in

DETAILS of installations beneath windows are seen here. Children are comfortable on tile floor of rubber. Drapes add to cheerfulness.

Tacoma wnere Annette Merklein, who teaches kindergarten in the movable room, is the envy of other teachers who must use the less modern rooms in the older buildings.

The portables can easily be made permanent, report Mock and Morrison, by providing permanent foundations and adequate maintenance care. Actually, the six portables in use at present in Tacoma may be moved to a rapidly-growing district where new subdivisions have created need for a school, when their emergency need is finished.

The six rooms were built under contract by A. F. Larson & Sons, of Tacoma on a bid price of $41,388. This price of slightly less than $7,000 per schoolroom compares to the average room cost of $25,000 in permanent school structures in Tacoma. And, while it is intended that these movable rooms be only a temporary fill-in until the present $7,444,000 building program is completed, the fact remains that Tacoma is still growing and the school officials may never catch up on their building needs. For that reason, the architects made every effort to design into these structures all of the conveniences and improvements developed in recent years in schoolroom design.

Several factors are important in viewing the accomplishments of these Tacoma architects in meeting a serious regional problem: the movable rooms have been constructed at low cost without sacrifice of comfort and convenience and without excessive straining of school budgets that are now plagued by rising costs without comparable increase in taxable base. Students and teachers report that they have no feeling of being disconnected from the rest of the school in these cheerful and well-equipped rooms. The additional fact stands out that the rooms can continue to be used as long as there is a need and will continue to serve if reasonable care and upkeep is given them.

INTERIORS have been finished with all modern conveniences and equipment. Annette Merklein, kindergarten teacher, conducts pre-school class.

California Council of Architects Convention

Palm Springs

November 6, 7, 8, 9, 1949

Dear Fellow Architect:

How about Palm Springs for a convention in November? Can you imagine what a wonderful time we will have with our wives? Your wife must come. Aside from the business this Convention is being designed around sociability which only can be supplied by our lovely Ladies. The seven Architects in Palm Springs form the entertainment and tours committee and are already lining up the best entertainment and rip roaring Western program any convention ever had.

The Desert Inn has turned over to the Architects the entire Inn and grounds for this occasion. The Chamber of Commerce is lining up additional rooms in close proximity. Everyone will have their meals at the Inn. There is no place on earth that prepares better meals than the Desert Inn.

There will be skeet, badminton, golf, both regular and pitch and putt golf, swimming, archery, croquet, tennis, bicycling, horseback rides, hay rides, tournaments and sightseeing.

We are planning to start the Convention on Sunday, November 6th, which will be devoted to registering of delegates, getting acquainted, relaxing, sightseeing and at 6:00 P.M. assemble for a cocktail party. Need we say more? Plan on coming Saturday evening if you can and stay a full week if you care to (at the same rate). Guest cards will be issued to both men and women for admission to the following Palm Springs exclusive clubs: The Tennis Club, the Racquet Club and the Shadow Mountain Club.

Plan now to make this Convention trip your vacation for this year or combine it with another trip, so put these dates down: November 6th, 7th, 8th and 9th.

SEND IN YOUR RESERVATIONS NOW. Give us lots of time to arrange for your complete comfort and entertainment. We want you to come and are planning to send you home tired from having so much fun.

Most Sincerely,

HARRY HAYDEN WHITELEY

Chairman 1949 Convention.

The Desert Is Lovely in November

GLYCERINE IN MODERN BUILDING MATERIALS

By MILTON A. LESSER

In the development of new and improved building materials, the technologists of the industry have come to appreciate and use glycerine for a variety of purposes. Sometimes it is employed because of its hygroscopic action to prevent brittleness. Or it may be a plasticizing agent, used because it is a reliable solvent, because it displays good penetration, or because it is an effective antifreeze.

Frequently glycerine enters the picture more indirectly—in the form of the alkyd resins. As a matter of fact, about one-quarter of all the glycerine produced in this coutry (amounting to many millions of pounds annually) goes into the production of synthetic resins. Alkyds are formed by the reaction of a polyhydric alcohol and a polybasic acid, plus various modifying agents to give the desired properties to the finished resins. Glycerine is by far the most important alcohol used in such reactions.

Because of their outstanding qualities, the alkyd resins have held for a number of years a dominant position among synthetic resins used in the formulation of protective and decorative coatings. This includes superior architectural enamels and protective structure paints. The alkyds also hold an important place among modern industrial adhesive or bonding agents.

PROCESS DEVELOPMENT

Over the years glycerine itself has found a number of uses in connection with cement, plaster and other building materials. It may be used, for example, in the production of light-weight porous artificial stone (e.g. concrete) suitable for insulating and other purposes (1). These effects are attained by incorporating gas, or foam-producing substances, into mixtures of lime or cement, or both, with silicious materials. Appropriate materials, including glycerine, are added to obviate the formation of capillary structures and thereby prevent water absorption of the stones, and to enhance the insulating power of the mix. Such combinations are allowed to expand at room temperature and are then steam-cured to yield the artificial stone.

Similarly interesting is a process (2) for the production of acoustic plastic mixtures in which glycerine is added or mortar that sets to a porous mass. In another case (3), it is suggested that glycerine be added to a wet plaster-cement mix to yield a combination which sets with a glossy surface. Of related interest is a method (4) for making strong, quick-setting and rapidly binding compositions for plugging walls, ceilings and the like. This consists of plaster-of-Paris or gypsum to which at least 5 per cent of glycerine is added. The mixture is moistened with water and when set has a dense structure, though retaining a plasticity sufficient to permit the introduction of screws, nails and such. When, on occasion, it is desired to slow up the drying rate of concrete or wood, this can be achieved by applying a hygroscopic mass consisting of animal size, water and glycerine (5).

Also well worth citing are foreign studies (6) of the possibility of obtaining strong anisotropic materials from thin glass filament. To obtain the

(See Page 35)

THE FIRST OFFICE

Single room on Laguna Street in Oakland

A Daring Adventure in Western Construction

Pacific Coast Company Sees And Grasps Development Opportunities

"A good many of us only enjoy a thing after it is past, when we can no longer recapture it except in memory.

"I think all the old-timers who started with F. C. Stolte company when it was a pup must have been pretty well adjusted men: they worked hard, but had a good time doing it."—

F. C. Stolte

Turning back the pages of time, one finds that F. C. Stolte, author of the above observation, is not only a keen observer of the past, but that he also possesses great vision and belief in the future and, furthermore has the strength and courage of his convictions to develop into material being the plans and confidence he has in the future of his company and of the nation. Without such qualifica-

tions he could not have started in the construction and contracting business in 1915 as an individual proprietor specializing in the building of better grade homes, and developed that small business beginning into an organization that today knows no limit to its field of endeavor, nor is limited in its geographical location of activity.

This individualized proprietorship and plan of operation, for it was definitely a part of a plan for bigger and greater things, continued from 1915 until 1932 when, because of a tremendous growth in activity and personnel the company was incorporated as the F. C. Stolte Company, with F. C. Stolte becoming the corporation's president.

With business activities expanding following World War I and the opportunity for a more diversified field of endeavor opening up in the early 20's, it became necessary to enlist the aid of competent assistants who were qualified by education and experience to develop the more specialized and technical phases of the construction industry.

Among those who joined the organization at this time was George C. Loorz, who had just graduated from the University of California at Berkeley. He became the firm's engineer and subsequently was named an associate in the business and later became a partner in the firm.

By 1942 the general activities of the organization had expanded, not only in the original home construction field, but also in a wide variety of diversified projects in the contracting industry and the heavy engineering field. The continuing growth of the company required internal expansion and so the company was re-incorporated under the name of Stolte Inc., and the company's internal operational structure set to function properly throughout the construction industry. Since that time the company has successfully undertaken and completed work in excess of $75,000,000, including some operations which have been carried on as co-ventures with participating contracting firms.

It is very interesting to note and of considerable pride to executives of the company, that during the ups and downs of the business, through two

TODAY'S GENERAL OFFICES, Oakland, California **Warren McClure, Designer**

world wars, a tremendous business recession and the current economic readjustment which has never before been faced by industry and business, there are still men on the payroll of the company today who began working with F. C. Stolte the day he started his contracting business. Numerous departmental heads can lay claim to many years of uninterrupted association with the Stolte organization.

During the years of rapid company expansion, and particularly during World War II when, because of the pressure to get a job done at a bare minimum of time, material and labor costs, it became necessary to develop a constant source

A DARING ADVENTURE
Stolte Inc.

The following firms, participants in the tribute to the Stolte Company, have display advertisements in this issue:

SAN JOSE STEEL COMPANY
MASTER PLUMBING & HEATING COMPANY
WESTERN GLASS COMPANY, INC.
A. E. KNOWLES
THE HERMANN SAFE COMPANY
C. E. TOLAND COMPANY
HOLLENBECK-BUSH PLANING MILL COMPANY
MONTEREY COUNTY PLUMBING COMPANY
BAY PLASTERING COMPANY
JUDSON PACIFIC-MURPHY CORP'N

ANGLO CALIFORNIA BANK BUILDING . . . Oakland, California **H. H. WINNER, Architect**

RUCKER-FULLER CO.
Market Street, San Francisco

Bolton White, Architect

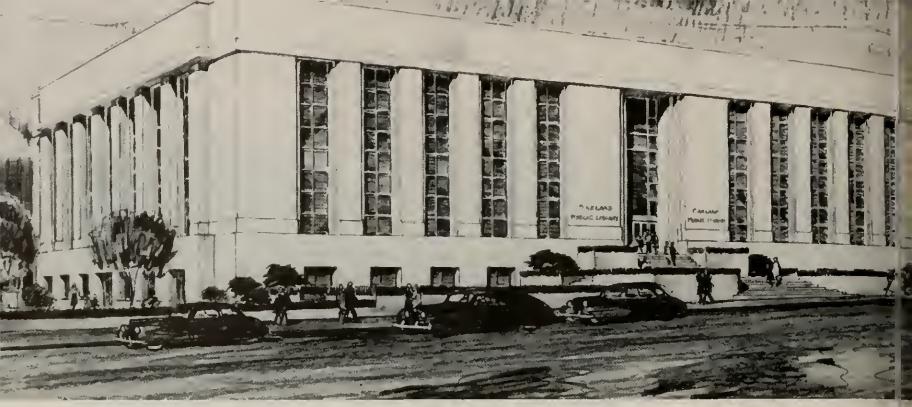
United States Army Air Base Hospital

Fairfield, California

BERGLUND TRACTOR and EQUIPMENT COMPANY

Napa, California

E. F. Reese, Designer



OAKLAND PUBLIC LIBRARY **MILLER & WARNECKE, Architect**

of material supply, the company explored and experimented with the possibilities of developing and operating subordinate firms so that now in addition to its firm name the corporation is the parent organization of the Del Monte Electric Company, the Monterey Plumbing Company, the Bay Plastering Company, the Armor Roofing and Insulation Company, the Armor Tile Company, Peerless Lumber Company of California, and the Peerless Lumber Company of Oregon.

In the belief that these companies can best serve their purpose in acting as entirely independent contractors, they are structurally set-up to perform the same services and supply the same materials and work for competitive contractors as they do for the Stolte company. Control is limited only to fiscal policies.

The variety of operations engaged in during the past eight years in the percentage of work accomplished would show that Industrial Plants and Factories have accounted for 10 per cent; Buildings, including Army and Navy facilities, represent 50 per cent of the activities; Docks, Wharves and Piers, show a 5 per cent ratio; Water Systems represent 5 per cent; Sewage Disposal Plants are 5 per cent; Water lines, Gas lines, sewer lines and other underground utilities represent a 15 per cent volume; Bridges and highways 8 per cent; and Miscellaneous items show a volume of only 2 per cent.

While a list of projects successfully constructed by Stolte would require more space than is available here, it is interesting to note that in the classification of Water Lines, Gas Lines, Sewer Lines and other underground utilities, the Company has laid more than 500 miles of underground pipe alone—steel, cast iron, concrete, transite and tile, and in sizes ranging from four inches in diameter to seventy-two inches in diameter. Much of this work was done in record breaking time as it was undertaken as urgent war necessity and in the face of acute material and serious labor shortages.

Currently, among other major projects in construction on the West Coast, Stolte is engaged in a Joint Venture on the second largest water pumping station in the world known as the Tracy Pumping Plant (see Cover illustration of this issue, and brief descriptive analysis on Table of Contents page). Located near Tracy, California, the work is being

done for the United States Bureau of Reclamation and is an integral part of the internationally famed Central Valley Water Project.

Other outstanding work now being done by the company, or completed recently, includes the Pumping and Appurtenances to the Delta Mendota Canal at Tracy, California; a new bridge and state highway construction at Santa Rosa, California; Concrete Pipe Sewer System for the City of Walnut Creek, California; a steel 12-inch water line for the California Water Service Company in Monterey; a 60-inch steel water line which is part of the Mokelumne Aqueduct No. 2 project of the East Bay Municipal Utility District, Oakland; a 4-inch, 6-inch, 8-inch and 10-inch Water line of twelve miles for the Washington Water and Light Company of Sacramento, California; Bulk Plant for the Union Oil Company at Antioch, California; Truck Service Station for Ray G. Henderson of Woodland; a Sewage Treatment Plant for the City of Santa Cruz, California; the Highway Overpass on Fifth Avenue in Oakland, which is part of the new shoreline highway of the State Highway System; and the large Fairfield U. S. Army Hospital at the Suisun Army Air Base near Fairfield, California.

Important as the construction projects are, the company has always taken the position that in order to produce a perfected project it was first necessary to produce qualified and key personnel. As a result each project is under the direction of George C. Loorz, vice-president and general manager of the corporation, who in turn assigns the

CAMBRIA RESERVOIR, California Water Service Company of San Jose, California, showing a type of work being featured by the Stolte Company along with roads, pipe lines, and other heavy construction.

work to a field manager who has comple supervision in conjunction with a superintendent or foreman as the work may require.

This executive supervision is backed-up and supplemented by assistance from a competent general office staff consisting of thoroughly trained engineers and skilled technicians. Available also is a complete staff of Civil Engineers, Electrical Engineers, Mechanical Engineers, Architects and Draftsmen, each of which is specialized in his own field.

The company designs and engineers some of the work it constructs, as numerous clients take advantage of the high quality of services offered by Stolte. However, the company has always maintained a strict policy of not engaging in contracting engineering and architectural services without doing the subsequent construction.

A. J. SWEETLAND HOME . . . Piedmont, California

SAN JOSE STEEL COMPANY

STRUCTURAL STEEL • REINFORCING STEEL
STEEL SASH • CHAIN LINK FENCE
CORRUGATED IRON AND ALUMINUM

STEEL CONTRACTORS & FABRICATORS

195 NORTH THIRTIETH ST. PHONE: COLUMBIA 4184 SAN JOSE 12, CALIFORNIA

LEFT: The living room of "The Bend" Hearst Ranch House, and at (Right) is the Tower exterior which rises majestically over the dining room.

Repair shops for maintenance of equipment, and for the design and construction of special equipment which might be required to fill some specific need on a particular job permitting a more economical and efficient operation, is also provided. The general yard at Oakland contains eleven permanent buildings which are devoted to the various shops, storage, administrative, and other activities related to the construction industry and the company's projects.

In addition a substantial supply of lumber is carried in stock in the Oakland yard, approximately a half million feet of all the common grades being on hand at all times for immediate use. The guiding characteristic of the company's facilities is to assure clients prompt service at an absolute minimum cost.

Included in the general offices and part of the administrative facilities is a well informed Purchasing Department which is thoroughly familiar with material sources and specification requirements, headed by a technically trained engineer with extensive experience in the field as an actual construction superintendent.

F. C. Stolte, takes a great deal of pride in discussing the long history of his firm and points with considerable satisfaction to some of the basic principles which have long been a measuring stick for the conduct of his company, and its re-

VAULT DOORS

For Various STOLTE Jobs

Installed by

THE HERMANN SAFE CO.

Since 1889

HOWARD AND MAIN STREETS SAN FRANCISCO

Phone: GArfield 1-3041

C. E. TOLAND COMPANY

334 RITCH STREET SAN FRANCISCO, CALIF.

METAL CRAFTSMEN

Miscellaneous Iron — Bronze — Stainless — Aluminum

Agent—Fenestra Building Panels • Holorib Steel Roof Deck

THE BEND HOUSE—Hearst Ranch House at Wyntoon, California

Warren McClure, Designer

MONTEREY COUNTY PLUMBING CO.

PLUMBING
HEATING
SHEET METAL

OAKLAND MONTEREY

HOLLENBECK-BUSH PLANING MILL CO.

Windows, Doors, Mouldings
and
General Millwork

Wholesale and Retail

2206 SOUTH VAN NESS FRESNO, 3-3296

STOLTE INC.

Since 1932

General Contractors

—:—

8451 SAN LEANDRO STREET

OAKLAND 3, CALIFORNIA

GYMNASIUMS for Bell and Montebello High Schools

LEFT: Marsh, Smith & Powell, Architects
RIGHT: Kistner, Curtis & Wright, Architects

lations with its customers, its employees, and the public in general.

Stolte considers, for example, that the firm has been modestly successful in its many accomplishments in the construction industry because of its policy to engage in every field of the construction industry where the firm can render an efficient and worth while service, and because the company earnestly strives to do the old things with better methods and the new things with new methods.

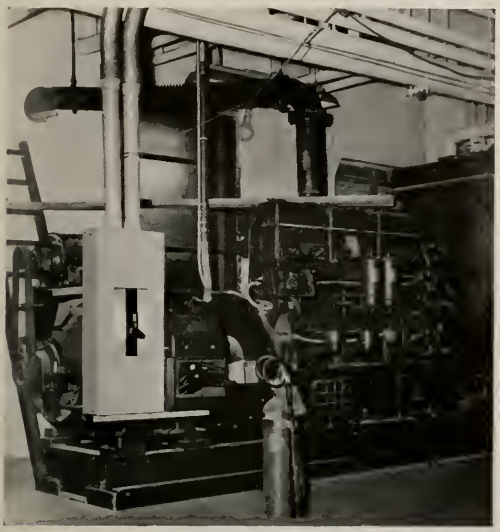
"We approach every problem with an open mind," says general manager George C. Loorz. "While for the most part our technicians are young and virile and thus not handicapped with fixed ideas in the construction of any project but from the standpoint of man hours of construction experience, if added for each individual in our organization it would total several hundred years."

In addition to the technically trained staff already mentioned, the Stolte Inc. organization has a large group of specialized personnel including men who have been trained and have practical operational experience in the petroleum industry,

HEATING - PLUMBING
VENTILATING
Oakland Central Library Building
Master
PLUMBING & HEATING CO., Inc.
1246 - 5th STREET
BERKELEY 2, CALIFORNIA
LAndscape 5-1957

WESTERN GLASS
is proud of its association with STOLTE INC.
GLAZING CONTRACTORS
MIRROR MANUFACTURERS
Jobbers of
STEEL AND ALUMINUM WINDOWS
SPECIALISTS IN GLASS
—:—
WESTERN GLASS CO., Inc.
Distributors of LIBBEY-OWENS-FORD GLASS
KE 4-6300
2352 EAST 12TH STREET OAKLAND, CALIFORNIA

PLASTERING
FURRING AND LATHING
in the new
Central Library Building, Oakland, Stolte Inc.
General Contractors
by
A. E. KNOWLES
PLASTERING CONTRACTOR
516 STANYAN STREET • SAN FRANCISCO
Tel. BAyview 1-3671



Standby Power Supply Unit in the Pacific Telephone and Telegraph Building.

various types of railroad construction, ocean and deep sea harbor facilities, steel mills, blast furnaces, and a wide variety of mining plants.

With branches of the company maintained in Los Angeles and Monterey, plus the general offices in Oakland, California, the firm is prepared to discuss plans and specifications with prospective clients on a "local" basis, and to offer them the many advantages of personal visits to projects, plants, and work under construction so that the clients may see for themselves the modern up to date, methods and modern types of equipment being used on each particular job.

Bay Plastering Co.

CONTRACTING

—:—

8451 San Leandro Street Phone TRinidad 2-1064

OAKLAND 3, CALIFORNIA

Branch Office: Monterey, Calif.

CONGRATULATIONS!

TO

STOLTE INC.

GENERAL CONTRACTORS

•

JUDSON PACIFIC-MURPHY CORP.

STRUCTURAL STEEL

REINFORCING STEEL

4300 Eastshore Highway

EMERYVILLE, CALIF.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Nevada State Board of Architects:
L. A. Ferris, President, Reno; Walter Zick, Secretary, Las Vegas; Directors, Aloysius MacDonald, Las Vegas; Russell Mills and Edward Carsons, Reno. Office, P. O. Box 2107, Las Vegas, Nevada.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hess, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; Charles T. Pearson, 2nd Vice-President; John M. Morse, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

STATE OF CALIFORNIA NEEDS ARCHITECTS

An opportunity for California architects to constructively participate in the state's $250,000,000 building program, was recently offered when the State Architect Anson Boyd sent out a call for Associate and Senior Architectural Draftsmen.

NORTHERN CALIFORNIA CHAPTER

Robert I. McCarthy, State Assemblyman from San Francisco, spoke on the many opportunities offered Architects under Proposition No. 1, which will be presented to the voters of California at the November election. The proposed measure calls for the issuance of $250,000,000 in bonds for construction of school buildings.

Plans were completed for attendance at the California Council of Architects at Palm Springs in November, with Donald Beach Kirby, Chapter president heading the large delegation.

MILITARY OFFICIALS CITED

The public service records of Lieut. Gen. Raymond A. Wheeler; Maj. Gen. Philip B. Fleming, and Maj. Gen. U. S. Grant III were cited recently by the American Institute of Architects executive committee.

General Wheeler, who retired this year from the post of Chief of Engineers, U. S. Army, was com-

mended for his "conscientious public service on behalf of the American people" and for his support and understanding of the architectural profession."

General Fleming, now chairman of the U. S. Maritime Commission, was cited for his "able work and brilliant administration of the Federal Works Agency, from 1941 to 1949.

General Grant was commended for his "many years of devoted service to the development of the city of Washington and for his major contributions to the art of planning."

ARCHITECTURAL COMPETITION

The Timber Engineering Company of California, in connection with their Washington offices and the National Lumber Manufacturers Association have announced an Architectural Prize Competition with $5,000 in cash awards for the winners. The contest, approved by the Committee on Architectural Competitions of the A.I.A. will close on January 15, 1950, and award winners will be announced March 15, 1950.

The contest deals with "The Suburban Apartment" and specifically covers an "Eight Family Wood Garden Type Apartment Building of Wood Frame Construction." Any architect, designer or draftsman, and students in recognized schools of architecture who will graduate in 1950 are eligible to enter. Entries may be made through the Timber Engineering Company of California offices in San Francisco.

PAN AMERICAN CONGRESS OF ARCHITECTS

More than thirty California architects will be represented in the 7th Pan-American Congress of Architects to be held in Havana, Cuba, in December.

The Congress, one of the few international competitions of its kind, will display the work of architects in the western hemisphere. Individual citations as well as a grand prize of honor to the country which has contributed most to architecture and design withir. the last several years.

Among the California architects who will participate are: Wurdeman and Becket; Parkinson, Powelson, Briney, Bernard and Woodford; Bamberger and Reid; Wurster, Bernardi and Emmons; and the following individuals: Richard Neutra, Alvin Lustig, Gordon Drake, Joseph Eshekirk, Ernest J. Kump, Robert Alexander, Francis Joseph McCarthy, Albert Henry Hill, Harwell Hamilton Harris, Thomas Church, Raphael Soriano, J. Clarence Felciano, J. R. Davidson, William Periera, Kenneth N. Lind, Gregory Ain, Charles Eames, Gardner Dailey, Whitney Smith, Eric Mendelsohn, Van Evera Bailey, Joseph Stein, Mario Corbett, Donald Olsen, William F. Cody and Garrett Ekvo.

FORCED AIR GAS FURNACES

Simple, heavy, sturdy. Precision-built by specialists in forced air gas heating. Unrivaled in accessibility. Finest controls. Famous Henderson multi-stream heat exchanger; assures uniform heating, high efficiency, low fuel cost.

CLIPPER PANELS are fitted to tolerances of 1 64"; must be easily removable and replaceable—typifying "custom" care in construction, pride of craftsmanship.

HENDERSON BLOWERS are manufactured complete in our own factory; delicately balanced for quiet smoothness and longer life!

FACTORY TESTING—Every Henderson unit is factory-assembled and then thoroughly tested in actual operation.

Write for Catalog Sheets

HENDERSON

FURNACE AND MFG. CO. • SEBASTOPOL, CALIF.

CLIPPER • CLIPPERETTE • HENDY "60"

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwold, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E.
San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Harry W. Bolin, President; E. C. Hillman, Vice-President; Robert Short, Secretary-Treasurer. Directors: S. B. Barnes, Lewis Osborne, John Case, Harold P. King, and Donald F. Shugart.
Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

STRUCTURAL ENGINEERS OF SOUTHERN CALIFORNIA

The Board of Directors of the Structural Engineers Association of Southern California have found a method to insure 100% turnout at its meetings, even under sultry summer heat conditions. The solution is to have Steve Barnes and Harold P. King on the board and take advantage of their good nature and hospitality.

An afternoon swim in the pool at Steve Barnes Tolucca Lake residence, followed by a barbecue steak dinner at the Harold King residence, made the August meeting a pleasant and workable one. Needless to say, the considerable amount of routine matters were taken up and done away with in short order.

Business matters taken up included the acceptance of several new members whose application have been received, and include the following.

Clarence S. Stacey, Member
Harry Heirshberg, Associate Member
Fred G. Freriks, Associate Member
John Rufkin, Associate Member
Jack E. Zehnder, Associate Member
Charles O. Tlanting, Junior Member

A report was submitted by the Secretary, Bob Short, on the results of the field day held last month. As usual this is the high light for the local group and second only to the annual convention. Other matters brought up for discussion included the request for increased number of reservations at the annual convention to be made available to the local group. Routine reports completed the business meeting.

Recognized Everywhere!
• Best Materials
• Finest Workmanship
• Trouble-free Valves and Fittings
• Complete Sanitation
Specify HAWS—and be sure!
IT'S HAWS FOR HIGHEST QUALITY
Write today for '49 HAWS Catalog.
HAWS SANITARY DRINKING FOUNTAINS
ELECTRIC WATER COOLERS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

The annual convention of the A.I.S.C., scheduled for October 31-November 3, at White Sulphur Springs, West Virginia, will offer an array of papers and discussions on vital subjects in the construction industry.

Many details of the convention program were established at the Board of Directors meeting in New York early in September.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

After due and careful consideration Chapter member George Washington has come up with the following definition of "A Structural Engineer, is a specialist in the field of civil enginering whose interests, education, training and experience have developed the knowledge of scientific principles, materials, construction procedures, and economics necessary to the planning and creation of any

structure which will economically and adequately support a required load of force."

However, George Sedgwick says "A Structural Engineer, is a man who, in addition to understanding the fundamentals common to all engineering, is particularly qualified by training and experience to direct the design and construction of buildings, bridges and related structures," and Charles U. Kring opines that "A Structural Engineer, is one qualified by education and experience to investigate, design and supervise the construction of the force resisting and load supporting elements of buildings, bridges, and other structures." Take your pick, but the judges awarded G. W. first prize.

HARRY B. CORLETT NAMED A.I.S.C. REPRESENTATIVE

Harry B. Corlett, has been appointed District Engineer of the American Institute of Steel Construction, Inc., for the Northern California and Nevada district, succeeding William H. Poppert who resigned from the duties as District Engineer on August 1st.

Corlett, well known in engineering circles throughout the West, is a native of California and has been identified, since graduating as Civil Engineer from the University of California, with such firms as the American Bridge Company; the Leonard Engineering Company; Ellison & King, Structural Engineers; and during the late War he served as assistant to Chief Engineer of Contractors for the Pacific Naval Air Bases.

Offices will be maintained in the Mechanics' Institute Building, San Francisco.

OPENS NEW GENERAL OFFICES IN SAN FRANCISCO

The Unit-Bilt Store Equipment Company has opened general sales and showrooms in San Francisco's Apparel City, occupying some 15,000 sq. ft., according to company officials.

Executive offices, sales rooms, drafting room and warehouse facilities will be maintained on the ground floor, while the mezzanine will be devoted to store planning, fixture design, architecture and engineering operations.

The expansion will improve facilities for the manufacturing and installing of store equipment, including planning and designing.

CALIFORNIA STATE ARCHITECT

Plans are underway by California's State Architect Anson Boyd to add 100 new architectural designers, draftsmen, and engineers to his Sacramento staff, to handle architectural and engineering details in conjunction with the State's announced $250,000,000 building program.

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

FORDERER CORNICE WORKS

Manufacturers of
Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.
SAN FRANCISCO, CALIF. HEMLOCK 4100

It's new!
...just the right height for children
Here, at last, is a drinking water cooler designed with the child in mind. Architects and school building authorities will appreciate its convenience in school cafeterias. The LO-LEVEL comes in various models for cafeteria use and as a combination cooler and fountain for drinking use.
Just the right height for children. Foot-pedal operation makes it easy for child to hold tray and still fill glass with water. Faster serving, less confusion, low-cost operation.
Write for full information.
THE HALSEY TAYLOR CO., WARREN, OHIO
Largest Exclusive Manufacturer of Drinking Fountains in the World
HALSEY TAYLOR
LO-LEVEL
Coolers
3-4
THE LITTLE COOLER FOR LITTLE PEOPLE

West Coast Plant, Redlands, Calif

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Galitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. MacJennett, Mueller Brass Company, 475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

Introducing:

GEORGE E. CONLEY

Our Chapter Vice-President

George belongs to that growing class of corporation career men who are becoming more and more plentiful. A native son of San Francisco, he attended Mission High School, and almost immediately after graduation started with Johns-Manville as a report clerk in the San Francisco office.

The war forced a military leave of absence for George, and from November of 1942 until June of 1946, he served in the Pacific Theatre. His photographic hobby was used extensively by the Army during those four years. George returned to Johns-Manville in June, 1946 with camera and full equipment. (Ed. note: He didn't say whose equipment).

GEORGE E. CONLEY
Building Products Division
Johns-Manville Company

His first reassignment as a bookkeeper was unquestionably a bad choice. Some of the books have never been the same. For morale purposes, George was transferred to the Sales Force, and on January 1, 1948 took over his present duties as Industrial Building Material and Architectural Adviser in the San Francisco area for the Building Products Division.

George has been married for three years. He reports that his hobbies are photography, model railroads, and amateur theatricals.

The enthusiasm and energy which have made him so successful with his own company, have made him equally well known in Producers' Council work.

NATIONAL NEWS:

The influence of local climate on home planning, the effect of technical research on the demand for construction, and the status of the building industry's public relations are among the subjects which were discussed at the annual meeting of the Producers' Council on September 29 at the Edgewater Beach Hotel in Chicago.

Miss Elizabeth, editor of House Beautiful, reported on a recent study of climate control, and Mr. William H. Scheick, director of the Building Research Advisory Board, discussed opportunities for technical research.

The industry's public relations was analyzed by Mr. Dilman M. K. Smith, vice-president of the Opinion Research Corporation.

Other speakers included Raymond M. Foley, administrator of the Housing and Home Finance Agency, who discussed the Federal government's new public housing, slum clearance and research programs at the luncheon session; Thomas S. Holden, president of the F. W. Dodge Corp., who forecast the trend in construction activity during 1950, and Henry R. Luce, editor-in-chief of Time, Inc., analyzed the structure of the building industry at the dinner meeting.

Members of the Chicago Building Congress and representatives of all branches of the building industry were invited to attend the luncheon, dinner and other sessions.

Other speakers were James M. Ashley and Charles M. Mortensen, president and executive secretary of the Council; Kenneth E. Wischmeyer, vice-president of the American Institute of Architects; C. W. Smith, Southwest Research Institute; J. G. Belcher, publishing director of Progressive Architecture, and Harold D. Hauf, editor of the Architectural Record.

COMING EVENTS:

Don't forget the Christmas Jinx. We hope to have all data available by the next issue.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

Glycerine in Modern Building Materials

(From Page 17)

requisite sheets, glass filaments were wound on a drum and simultaneously sprayed with a binder solution. On hardening of the binder, the sleeve thus formed was cut parallel to the axis of the drum. Filaments made with an alkyd resin binder were among those showing the highest tensile strength and other desirable properties. Further tests showed that ribbons containing 50 per cent of glass filaments and 50 per cent of alkyd resin can be substituted for steel wires in ferro concrete of the Freycinet type.

Both glycerine and glycerine-containing alkyd resins are useful in the production of building board sheets and plates consisting of compressed fibrous materials. For instance, one process (7) for making light-weight slabs consists of impregnating materials like wood wool, sawdust, reeds or straw with a mixture of waterglass, glycerine and hydrochloric acid.

In a more up-to-date patent (8) describing the production of coated wallboard, both glycerine and alkyd resins serve valued functions. Such products are made by applying suitable coatings to freshly pressed wood or vegetable fiber board so as to produce a water-resistant board with a well-anchored coating. A coating of the protein dispersion type can be made from water, borax, soybean protein, boric acid, glycerine and white clay. If a resin type coating is desired, this may consist of an aqueous emulsion of a glycerine-phthalic anhydride alkyd resin plus titanium dioxide.

Other modern processes for making similar building elements with improved characteristics also utilize alkyd resins in the coating composition. One such method (9) results in a fibrous sheet material which is economical to use and apply, has good insulating properties, and has a smooth hard surface that permits the board or sheet to be used as the exterior surface itself rather than merely as a sheathing material. This is attained through the employment of an alkyd-utilizing surface treatment that provides a pleasing appearance, plus resistance to weather and wear as ordinarily received by exterior building surfaces.

Another process (10), which employs alkyd resins in conjunction with other synthetic resins, yields a new type of coated wall tile which is an imitation of ceramic tile. Such a product is made by applying three coatings—a surfacing composition, a primer, and a finish or topcoat—to a pressed wood fiber board base. Suitably modified glyceryl phthalate alkyds are present as major ingredients of the two final coats. The surface of the finished wall board tile is waterproof, resistant to grease, soap and alkali, easily clean-

(See Page 38)

RIGHT the first time
RIGHT every time

ADEQUATE WIRING Certified

RIGHT for your clients, because . . .

. . . adequately wired homes assure them all the convenience, comfort and exciting modern touches which they planned so enthusiastically at the blueprint stage.

RIGHT for the house, because . . .

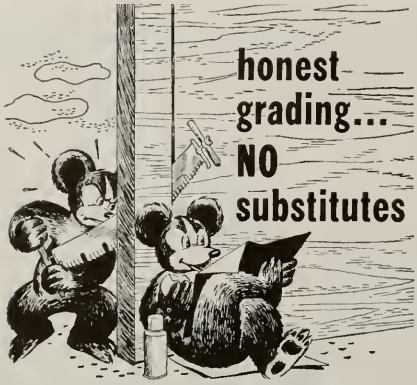
. . . adequately wired homes receive higher appraisals for loans — command greater resale prices. An adequately wired home is a tribute to your professional good judgement.

RIGHT for your business, because adequately wired homes enhance your reputation as an architect or contractor and build valuable come-again business. When you plan a home, specify **Certified Adequate Wiring.** It's a sound investment for your client—a good investment for you.

★

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street San Francisco 3



E. K. WOOD LUMBER CO.

GENERAL OFFICES: P. O. Box 1618, Oakland, California
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon

RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

BAXCO
CHROMATED ZINC CHLORIDE
CZC
PRESSURE TREATED LUMBER
● **PROTECTS AGAINST DECAY AND TERMITE ATTACK**

Specify it in your home
Available through Lumber Dealers

LOS ANGELES
601 W. 5th Street
Phone MIchigen 6294

SAN FRANCISCO
333 Montgomery Street
Phone DOugles 2-3883

J. H. Baxter & Co.
AGENTS FOR **WEST COAST WOOD PRESERVING CO.** SEATTLE, WASH

HEADLINE NEWS & VIEWS

By E. H. W.

SAN FRANCISCO building permits for the first half of 1949 were up 51.8% in value but off 20% in number compared to a year ago.—Research Department San Francisco Chamber of Commerce.

* * *

GOVERNMENT subsidies have never been an incentive for reducing the cost of anything.

* * *

IN order to assist more veterans to obtain their own homes with government financing aids, the interest rates on G.I. home loans and FHA insured loans should be more equal.—Rodney M. Lockwood, president, National Association of Home Builders.

* * *

SENTIMENT for easing the burden of excise taxes as a stimulus to business continues to mount although immediate action remains doubtful.

* * *

MORE than 60% of the shower equipment made is being installed in existing homes five years old or older:—Plumbing & Heating Industries Bureau.

* * *

BUSINESS conditions nationally have stabilized for the general contracting industry in the construction of buildings, highways, airports, railroads and engineering projects: — Associated General Contractor's of America.

* * *

LOS ANGELES Regional Planning Commission has just issued its Annual Report for 1947-48, which contains a great deal of very interesting information relative to the vast planning problems, and their solution, for the City and County of Los Angeles.

* * *

FEDERAL payroll personnel rose 21,284 during the first six months of 1949. The U. S. Senate Committee on Expenditures has reported the total 2,124,120 Federal employes on July 1st—129,375 higher than January 1, 1948.

* * *

"ONE of the greatest disappointments of the postwar years has been the almost complete failure of the highly touted, widely dreamed of, pre-fabricated house, which was to have been made in vast quantities at moderate costs":—Frederick Monho, Los Angeles Architect.

* * *

ARCHITECTS CONVENTION. The California Council of Architects will hold their annual convention in Palm Springs on the 6, 7, 8 and 9 of November. A worthwhile program is in store for those who attend.

IN THE NEWS

HUGE PROJECT PLANNED

A large development project has been announced for San Pablo (California) consisting of the construction of a new shopping center, San Francisco bay beach facilities, a pleasure fishing pier, and some four thousand residences.

Comprising an area of 700 acres it is estimated the project wil cost $25,000,000.

CONSERVATION GROUP FORMED

The Forest Conservation Committee of the Pacific Northwest Forest Industries has been formed with general offices in Portland, Oregon, for the purpose of promoting better forest practices, better protection, tree farms, and improved management practices on tax paying timber holdings.

E. P. Stamm, Portland, is Chairman, and George L. Drake of Shelton, Washington, vice chairman of the executive committee. W. D. Hagenstein, forest engineer of Portland, will have charge of the Douglas Fir work.

LIGHT FOOTBALL FIELD

The Coalinga Union High School District is making arrangements for the floodlighting of the high school field at an estimated cost of $31,500. Architects on the project are Kump & Falk of San Francisco. The Electric Service Company of Half Moan Bay will make the installation.

REJECT BIDS

The 24th District Agricultural Association have rejected bids covering the cost of installing an electrical distribution system, interior lighting, and floodlighting of the sports field at the Tulare (California) Fair Grounds.

Estimated cost of the work was $82,000.

HIGHEST LIGHTING HONOR

Dr. Ward Harrison, who retired in 1948 as Director of Engineering for General Electric Company at Nela Park near Cleveland, has been awarded the coveted I.E.S. Medal, according to a recent announcement by the Illuminating Engineering Society.

WAR MEMORIAL

Bonds in the amount of $396,000 have been voted with proceeds to be used for the construction of a new War Memorial Building in Daly City (California). An auditorium, meeting halls, and recreation center are included in the project.

IDAHO HIGHWAY CHANGE

An agreement has been reached between the State of Idaho and the Commissioner of Public Works for the State of Idaho, for relocation of 12 miles of State Highway 21.

Relocation of the highway is contemplated in conjunction with construction of the Luck Peak Dam Reservoir which would inundate the present highway.

CARNEGIE TECH

Dr. J. C. Warner, Dean of the Graduate Studies and head of the Chemistry Department at Carnegie Institute of Technology, has been named President-elect to succeed Dr. Robert E. Doherty, who will retire as Carnegie's president in 1950.

ARCHITECT MOVES

Paul C. Overmire, Architect, has moved his offices from 580 Washington street, San Francisco, to 57 Post street, same city.

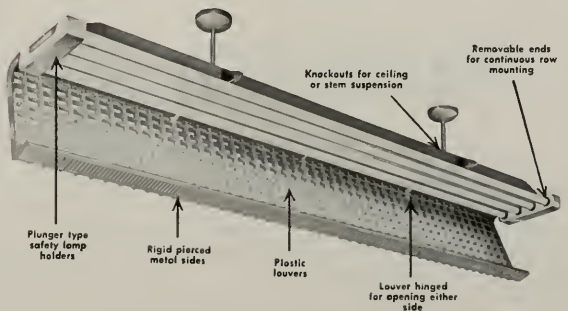
OUTSTANDING!

SMOOT-HOLMAN'S

New

CONSTELLATION

SLIMLINE FLUORESCENT


Removable ends for continuous row mounting
Knockouts for ceiling or stem suspension
Plunger type safety lamp holders
Rigid pierced metal sides
Plastic louvers
Louver hinged for opening either side

This outstanding luminaire utilizes the brand new high output 75 watt, 430 m.a. T-12-96" fluorescent lamp. It is scientifically engineered to produce the utmast in lighting quality and efficiency. "Wanderful — I've never seen such a beautiful unit!" says a leading illuminating engineer.

WRITE FOR CIRCULAR

SMOOT-HOLMAN COMPANY
SMOOT-HOLMAN
INGLEWOOD, CALIFORNIA
MADE IN U.S.A.

Offices in Principal Western Cities—Branch and Warehouse in San Francisco

CLINTON
CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CEDARWALLS
RED CEDAR
SIDE WALL SHINGLES
"Wonder Cote" Finished
in Nine Attractive Colors
Detailed Specifications Furnished on Request
SIDEWALL LUMBER CO.
1994 Oakdale Ave. San Francisco 24 ATwater 2-8112

Glycerine in Modern Building Materials

(From Page 35)

able, and highly resistant to steam and prolonged exposure to conditions of high humidity.

Glycerine and resins made with it also enter into the production of the protective and insulating materials required by the roofing and siding branch of the building industry (11). An example of glycerine's usefulness is offered in a process (12) for making a sheet-like material suitable for roofing and siding. In this instance, a base sheet, such as felt, is provided with a weatherproof covering and then a portion of the sheet (the part to be lapped over an adjacent sheet) is treated with a cementing composition. This composition is not sticky under ordinary conditions, but it is made adhesive after application by the action of rain and natural moisture. The required cementing composition is made from a mixture of clay, lignin and glycerine.

SPECIALIZED USES

Glycerine also has a number of more or less specialized uses with the various kinds of bituminous materials used by the modern roofer. For example (13), highly viscous aqueous dispersions of bituminous materials are made by adding a water-soluble polyhydric alcohol, like glycerine, to the bitumin. In an indicative method, a mineral oil distillate bitumin is mixed with small quantities of glycerine, potassium oleate and potassium hydroxide and then dispersed in water. In another process (14) for making a roofing mastic with a bituminous base, glycerine is used to prolong the setting time. Also interesting is the use of glycerine's anti-freeze properties to lower the freezing points of bituminous emulsions so that they will not congeal at temperatures below 0°C. Injury to the emulsions is avoided by adding suitable proportions of glycerine (15). Such treatment is valuable, of course, where work must be done under adverse winter conditions or when bituminous emulsions are stored in unheated places during cold weather.

Antistick coatings designed to prevent the coadhesion of sheets or rolls of bituminous roofing materials also make use of glycerine-containing compositions to reduce tackiness. Thus, in the manufacture of protected metal roofing or siding sheets, there is a tendency for the bituminous surfaces to stick together when nested, especially during warm weather. A recent solution (16) to this problem calls for the use of a mixture of low viscosity methyl cellulose, glycerine and a small proportion of the sodium salt of sulfated heptadecanol. The mixture is diluted with water before use.

Alkyd resins may be used for similar purposes. This is evident in a process (17) for making sheet

(See Page 43)

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

THE CONTRACTORS' EQUIPMENT OWNERSHIP EXPENSE MANUAL. Construction Foundation, 1227 Munsey Bldg., Washington, D. C. Price $1.00

The Associated General Contractors of America, Inc., has published a revised edition of this manual containing two principal changes: 1) Nearly 1,400 items of equipment have been added to those carried in previous editions; and 2) Sample costs in dollars for the various items listed are omitted, so that the contractor can insert the actual price paid for each item of machinery and equipment to which the percentages apply.

A few slight typographical changes have been made to make it easier to use.

AMERICAN STANDARD ADMINISTRATIVE REQUIREMENTS FOR BUILDING CODES. American Standards Association. Price 55c.

A new edition prepared as a guide to help cities and states bring about a greater uniformity in administration of building codes. Covers prefabricated construction, new types of construction as applied to all types of cities.

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

123. NEW MODEL BRUNING DRAFTER

A 20 page, highly illustrated booklet has just been published, describing all models of the Bruning Drafter. The new model Bruning Drafter is announced, introducing the exclusive "Equipoise" mechanism for overcoming gravity. It also contains detailed drawings of 38 standard and special scales available for use with the Drafter. Bulletin A-1055, 9/49.

124. BLUE RIDGE AKLO GLASS

The story of how glass may filter daylight, to bar out rays that tire the eyes and carry heat, is told in picture and diagram in the new folder on "Blue Ridge Aklo Glass" issued by Libbey-Owens-Ford Glass Company. Advantages pointed out for frosted Aklo glass are lowered costs of air conditioning, reduction of materials spoilage, greater efficiency of personnel, reduction of glare, and long life because of its resistance to thermal shock and low expansion characteristics. 8 pages—illus. 9/49.

125. G. E. AIR CONDITIONERS

Packaged air conditioners for a wide variety of applications are described in a series of bulletins issued by the Air Conditioning Department of the General Electric Company. Each of the Bulletins describes and pictures the units and gives specifications, ratings and dimensions. PM 79-0101; PM 79-0201; PM 79-0401 illus. 7/49.

ARCHITECT AND ENGINEER,
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

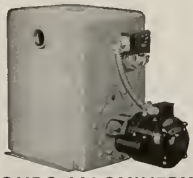
123 124 125

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after

(November 15th.—A. & E.)

"AMERICAN - MARSH"
CONDENSATION UNIT

Pumping Machinery for Every Purpose



For Service Call DOuglas 2-6794 or MUtual 8322

SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles

525 MARKET STREET, SAN FRANCISCO
Phone SUtter 1-6747
3522 COUNCIL STREET
(Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF.
Telephone Fairfax 7834

GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer

REPUBLIC STEEL

See Sweet's Catalog File or write us for full information.

REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO

DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork

16 Beale St., San Francisco
GArfield 1-7755
2215 El Camino Real, San Mateo
S. M. S-0687
304 Bryant Street, Palo Alto
P. A. 3373
2610 The Alameda, Santa Clara
S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles
THornwall 4196
MAIN OFFICE — SANTA CLARA

IN THE NEWS

NAMED PRESIDENT OF ENGINEERING SOCIETY

Charles H. Goddard of the Sylvania Electric Products Company has been elected president of the Illuminating Engineering Society for the ensuing year. Election was made at the Association's annual meeting in September at French Lick, Indiana.

ANNUAL A.G.C. CONVENTION

The 31st annual convention of The Associated General Contractors of America, inc. will be held in San Francisco (California) on February 27 to March 2, 1950, according to an announcement by Charles L. Harney, A.G.C. Director.

Indications are that it will be the biggest meeting in A.G.C. history.

APPOINTED PACIFIC COAST DISTRICT MANAGER

Walter J. Maytham, Jr., formerly of Chicago, has been appointed Pacific Coast district manager for the Westinghouse Electric Corporation, according to a recent announcement by T. Fort of Pittsburgh, Pa., manager of the company's apparatus sales.

Maytham will take over the duties of Chas. A. Dostal, vice president, who retires soon after more than 43 year's service with the company.

Headquarters will be in San Francisco.

TIN RESEARCH INSTITUTE

The Tin Institute Inc. has been organized with general executive offices in Columbus, Ohio, for the purpose of providing free technical service to users of tin in the United States.

Technical experts are for consulation and practical assistance at either the Institute or at consumer's plants.

R. J. Nekervis is supervisor of Metallurgical Development and R. M. MacIntosh is supervisor of Chemical Development.

HOME BUILDERS TACKLE BUILDING CODE PROBLEM

A concerted drive for the development of orderly building codes, backed by contributions from the building industry, has been undertaken by the National Association of Home Builders.

According to Carl G. Lans, of the Home Builders, "deficient building codes are totally unnecessarily adding costs to every house bought or rented. In many cases local ordinances bar the use of new materials or require types of construction and use of materials now outdated."

The introduction of sensible building codes throughout the country will result in savings amounting to many millions of dollars.

HIGHWAY 40 LIGHTED THROUGH DENVER

A nine and a half mile ribbon of sparkling, blue white light now marks the path of U. S. Highway 40 through the City of Denver, Colorado.

Modern 16,000-lumen mercury-vapor luminaries have been installed from city limit to city limit, and it is believed this is the longest single stretch of mercury lighting through any one city. The installation comprises more than 450 fixtures mounted 30 feet above the pavement on poles staggered at 110 foot intervals.

The work is part of a ten year project of lighting Denver's streets.

HOSPITAL BUILDING

Architect Robert Stanton of Carmel (California) has been selected to design a new 20-bed Hospital Building for the John C. Fremont Hospital District, Mariposa county.

MEMORIAL HOSPITAL

Architect Albert W. Kahl of San Mateo has been commissioned by the Corning Memorial Hospital District of Corning (California) to design a 25-bed Memorial Hospital which will cost approximately $260,000.

George Washington and Felix H. Spitzer are Structural Engineers for the project.

CHEMISTRY BUILDING

Architect Michael Goodman, Berkeley, has under way the design of a $1,250,000 Virus and Bio-Chemistry Building for the Berkeley Campus of the University of California.

The building will be 4 or 5 story of reinforced concrete construction.

ENGINEERS REJECT

The U. S. Corps of Engineers, Sacramento office, have rejected a bid of $96,400 for the construction of temporary nurses quorters and 4-Duplex units at the Veterans Administration Hospital in Fresno. Structures were to be of frame construction.

GRAMMAR SCHOOL — EARLIMART, TULARE COUNTY: Earlimart Elementary School District, owner, $440,000. ARCHITECT: David Horn & Marshall Mortland, Fresno. GENERAL CONTRACTOR: Dohs Construction Co., Fresno.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$50.00 to $90.00 per M, truckload lots, delivered.

Fire Brick—Per M—$90.00 to $125.00.

Cartage—Approx. $9.00 per M.

Paving—$75.00.

BUILDING PAPER & FELTS

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.20
30-lb. roll	2.93
Compcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$3.13
Deadening felt, 1-lb.	3.69
Asphalt roofing, 15 lbs.	2.20
Asphalt roofing, 30 lbs.	2.93
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$1.75
Medium	2.04
Heavy	2.40
Extra Heavy	2.77

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.
Sash weights, cast iron $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	$4.75
Nails, per keg, base	$10.55
6-in. spikes	10.55
Rim Knob lock sets	1.80
Butts, dull brass plated on steel, 3½x3½	.73

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympic (Nos. 1 & 2)	3.56	3.88
Cement—		
Common (all brands, paper sacks), carload lots, $3.38 per bbl. f.o.b. car; delivered $3.60.		
Per Sack, small quantity (paper)	$1.00	
Carload lots, in bulk per bbl.	2.78	
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.		
Cash discount 2% on L.C.L.		
Trinity White, Medusa White	1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.	

CONCRETE READY-MIX—

1-2-4 mix. to 10 yards*	$11.75
10 to 100 yards*	10.75
Over 100 yards*	10.25

* Delivered to site.

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$.16	$.16
6x8x16-inches, each	.21	.21
8x8x16-inches, each	.25	.25
12x8x16-inches, each	.33	
12x8x24-inches, each		.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$6.50
⅜-inch to ⅛-inch, per cu. yd.	6.50
⅛-inch to 0-inch, per cu. yd.	7.00

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnesite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—1/8"—$3.50 sq. yd. 1/16"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

13/16 x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

13/16 x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

13/16" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .25 per □ ft.
Double Strength Window Glass	.35 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
¼ in. Polished Wire Plate Glass	1.00 per □ ft.
¼ in. Rgh. Wire Glass	.58 per □ ft.
Obscure Glass	.45 per □ ft.

Glazing of above is additional.

Glass Blocks—$2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation— (2")	$65.00 per M sq. ft.
Cotton Insulation—Full-thickness (3⅝")	$95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides	$23.50 per M sq. ft.
Tileboard—4'x8' panel	$9.00 per panel
Wallboard—½" thickness	$55.00 per M sq. ft.
Finished Plank	$69.00 per M sq. ft.
Ceiling Tileboard	$69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common	$85.00 per M
No. 2 Common	83.00 per M
Select O. P. Common	90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. S & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 6 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	18c fo 20c per ft.
Plyscard	11½c per ft.
Plywall	9c per ft.
Plyform	15c per ft.

Shingles (Rwd. not available)—

Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.

Average cost to lay shingles, $6.00 per square.

Cedar Shakes—½" to ⅝" x 24/26 in handsplit tapered or split resawn, per square $15.25

¾" to 1¼" x 24/26 in split resawn, per square 17.00

Average cost to lay shakes,— 8.00 per square

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.44, Copper Bearing, per carloads, per 100 sq. yds. $35.50

Standard Ribbed, ditto 37.70

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard 85c
Three-coat work	per yard $1.10
Cold water painting	per yard 25c
Whitewashing	per yard 15c
Turpentine	$1.85 per gal. in 5-gal. cont.
Raw Linseed Oil	$3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil	$3.23 per gal. in drums.
Boiled Linseed Oil	$3.33 per gal. in 5-gal. containers.
Replacement Oil	$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil	$3.00 per gal. in 1 gal. cont.

A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Seilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.

Processed LLiLme—$4.15 per bbl. at yard.

Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.

Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.

Less than 30 sqs. $14.00 per sq.

Tile $40.00 to $50.00 per square.

No. 1 Redwood Cedar in place, 4½ in. exposure, per square	$18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square	14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square..	18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square	23.00

Re-coat with Gravel $5.50 per sq.

Asbestos Shingles $35 to $45 per sq. laid.

½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $24.00

¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $29.00

1 x 25" Resawn Cedar Shakes, 10" Exposure 22.00

Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton $99.50

Vitrified, per foot:

Standard, 8-in.	$ .62
Standard, 12-in.	1.09
Standard, 24-in.	4.72

Clay Drain Pipe, per 1,000 L.F. in carload lots:

Standard, 6-in.	$211.00
Standard, 8-in.	352.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.

Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12', $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).

Galvanized iron, 65c sq. ft. (flat).

Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill

$270 per ton erected, when out of stock

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd.	$7.1
⅜-in. Rd.	6.4
½-in. Rd.	6.2
⅝-in. Rd.	6.0
¾-in. & ⅞-in. Rd.	6.0
1-in. & up	5.9

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.75 per sq. ft.

Cove Base—$1.35 per lin. ft.

Glazed Tile Wainscot—$2.00 per sq. ft.

Asphalt Tile Floor ⅛" x 9"—$ .40 per sq. ft. Light shades slightly higher.

Cork Tile—$1.00 per sq. ft.

Mosaic Floors—See dealers.

Lino-Tile—$1.00 per sq. ft.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.25 sq. f
4 x 6 x 12	1.50 sq. f
2 x 8 x 16	1.45 sq. f
4 x 8 x 16	1.75 sq. f

Building Tile—

8x5½x12-inches, per M	$139.5
6x5½x12-inches, per M	105.0
4x5½x12-inches, per M	84.0

Hollow Tile—

12x12x3-inches, per M	$124.0
12x12x4-inches, per M	139.5
12x12x0-inches, per M	176.0

VENETIAN BLINDS—

75c per square foot and up. Installatio extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

Glycerine in Modern Building Materials

(From Page 38)

bituminous roofing in which a roofing felt is continuously impregnated with asphalt material which is allowed to harden. While this coating is still hot, it is sprayed with an enamel containing a thermosetting alkyd resin as the main ingredient. This final coating not only affords additional protective qualities, but also serves to prevent the superimposed sheets of roofing from sticking together.

BINDING PROPERTIES

There is also growing evidence that the binding properties of the alkyds, as contrasted to their coating uses, are finding growing utility in making insulating and related materials for the building industry. Thus, a thermosetting alkyd resin can be used as a binder for mineral wool to yield products that possess such desirable properties as resilience, waterproofness, dustproofness and lightness of packing (18). The bonding properties of alkyds are also utilized in another method (19) for manufacturing composite thermal insulation. In this procedure, a thin asbestos paper laminate is impregnated with a plasticizer phenolic resin. This resin-impregnated laminate is then affixed to a mineral wool bat or felt by means of an appropriate cement. Alkyd resin emulsions are listed as being suitable for this purpose. The exposed hard surface of the resulting composite insulation can be attractively finished with a decorative coating.

BIBLIOGRAPHY: K.I.A.: Brit. Pats. 480,681, 1938 & 502,780, 1939; 2) Visser, C. K. & Zwikker, C.: Brit. Pat 499,172, 1939; 3) Imperial Chem. Ind., Ltd.: Fr. Pat. 730,357, 1932; 4) Budie, E. R.: Brit. Pat. 491,826, 1938; 5) Firma Paul Leckler: German Pat. 605,890, 1934; 6) Burov, A. K. et al; J. Tech. Phys. (U.S.S.R.) 15: 407 & 425, 1945 (through) Chem. Abstr. 40:2712, 1946; 7) Grossman, B. E.: Brit. Pat. 444,692, 1936; 8) Heritage, C. C.: U. S. Pat. 2 409,628, 1946; 9) Frost, O. W. & Conover, J. H.: U. S. Pat. 2,398,632, 1946; 10) Gilbert, E. R.: U. S. Pat. 2,432, 757, 1947; 11) Anon.: United Rocfer, Sept. 1944; 12) Hollister, L. A.: U. S. Pat. 2,222,868, 1940; 13) Colas Kaltasphalt G.m.b.H.: German Pat. 674,899, 1939; 14) Fischer, A. C.: U. S. Pat. 1,905,376, 1933; 14) Hay, G. S.: U. S. Pat. 1,778,760, 1930; 16) Young, J. H. & Jenkins, P.W.: U. S. Pat. 2,440,626, 1948; 17) Giles, J. D.: U. S. Pat. 2,094,150. 1937; 18) Coss. H. T.: U. S. Pat. 2,375,284, 1945; 19) Ximenez, M. R.: U. S Pat. 2,393,947, 1946.

Book Reviews & Pamphlets

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to Sept. 1, 1949.)

CRAFT	San Francisco	Alameda	Contra Coste	Fresno	Sacramento	Santa Clara	Salano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	3.00*	3.00	3.00	2.50	3.00	3.00	3.00	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.17$	2.175	2.175	2.175	2.175	2.175	2.12	2.12	2.12	2.12	2.12
CEMENT FINISHERS	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
ELECTRICIANS	2.50	2.50	2.50	2.25	2.50	2.50	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.32	2.32	2.32	2.32	2.32
STRUCTURAL STEEL	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.20	2.20	2.20	2.20	2.20
STRUCTURAL	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
CONCRETE	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
LATHERS	2.8125	2.8125	2.8125	2.8125	2.00*	2.50*	2.8125	2.8125	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
PLASTERERS	2.8125	2.50*	2.50*	2.25*	2.25*	2.50*	2.50*	2.8125	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.50	2.25*	2.25*	1.775*	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.25	2.25	2.25	1.875	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.25	2.25	2.25	2.125	2.30	2.40	2.125	2.125	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	3.00	2.8125	2.8125	2.25*	2.8125	2.8125	2.8125	2.05*	1.50	1.50	1.50	1.625	1.715
TILESETTERS	2.675	2.675	2.675	2.15	2.00	2.675	2.675	2.4375	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:
CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

WANTED: Engineer, preferably graduate mechanical with 10 years in gypsum industry with executive experiences. In answering state salaries received and expected, as well as experiences. Box 100, Architect and Engineer, 68 Post St., San Francisco, Calif.

GET THE BEST, don't be satisfied with anything but the best. Window sash, Doors, Cabinets, etc. Town Talk Sash & Door Mill, 524 9th St., Sacramento.

WANTED! A market for the complete output of a sizeable redwood shingle mill: Write Box W, Architect & Engineer, 68 Post Street, San Francisco.

ADVERTISERS wishing to sell building materials and products, GET THE BEST RESULTS from regular advertising schedules in ARCHITECT & ENGINEER magazine. Write for complete information, including rates, circulation, etc., 68 Post Street, San Francisco.

FLOOR COVERINGS for industrial, commercial, and residential construction. Complete lines, one of the oldest, best established organizations in the Sacramento Valley. LATTIN'S, INC., 1519 Alhambra Blvd., Sacramento.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

10 APARTMENT BUILDINGS, Sacramento, Sacramento County: Jere Strizek Inc., owner; 120 apartments, $1,000,000. ARCHITECT: Herbert E. Goodpastor, Sacramento. 2 story; frame & stucco construction.

OFFICE, DISPLAY & WAREHOUSE, San Francisco: Leo J. Meyberg Co., owner; $200,000. ARCHITECT: J. Francis Ward & John S. Bolles, San Francisco. 2 story; class 3 reinforced concrete & frame construction. GENERAL CONTRACTOR: Cahill Bros., San Francisco.

HIGH SCHOOL ADDITION, Redding, Shasta County: Shasta County Union High School District, owner; 10 classrooms addition, $176,767. ARCHITECT: Chas. F. Dean, Sacramento. 2 stories. GENERAL CONTRACTOR: B & R Construction Co., San Francisco.

STORE BUILDING, San Jose, Santa Clara County: W. B. & Leo Shulmon, owners; 4 stores, $34,659. ARCHITECT: L. F. Richards & Logue, Santa Clara. 1 story, 80 x 80, reinforced concrete, frame construction, plate glass front. GENERAL CONTRACTOR: Bridges Construction Co., San Jose.

STORE BUILDING, Stockton, San Joaquin County: James March, Stockton; $46,360. ENGINEER: Ohm & Eckland, Stockton; 1 story, 80 x 100, brick & structural steel roof trusses, roman brick & plate glass front. GENERAL CONTRACTOR: Moore Construction Co., Stockton.

BURBANK GRAMMAR SCHOOL ADDITION, San Jose, Santa Clara County: Burbank Elementary School District, owner; recreation building, $26,980. ARCHITECT: Kress & Gibson, San Jose. Frame & stucco construction. GENERAL CONTRACTOR: Lew Jones Construction Co., San Jose.

CROWLEY GRAMMAR SCHOOL, Visalia, Tulare County: Visalia Elementary School District, owner; $86,783. ARCHITECT: David Horn & Marshall Mortland, Fresno. GENERAL CONTRACTOR: Midstate Construction Co., Fresno.

CONVENT BUILDING & PAROCHIAL SCHOOL REMODEL, San Francisco: Roman Catholic Archbishop of San Francisco, owner; $213,777. ARCHITECT: Brouchoud & Story (A. W. Story, Architect), Chico. STRUCTURAL ENGINEER: John G. Little, San Francisco. 4 story, reinforced concrete construction. GENERAL CONTRACTOR: Moore & Roberts, San Francisco.

GYMNASIUM BUILDING, Richmond, Contra Costa County: Richmond Board of Education, owner; Harry Ellis Jr. High School, $361,700. ARCHITECT: Dragon, Schmidts & Hardman, Berkeley. Reinforced concrete construction. GENERAL CONTRACTOR: Frank Payne & Son, Orinda.

OFFICE BUILDING, Santa Clara County: Santa Clara University, owner; Della L. Walsh; $143,282. ARCHITECT: Binder & Curtis, San Jose. 2 story & basement, 45 x 140, reinforced concrete construction. GENERAL CONTRACTOR: Carl N. Swenson Co., San Jose.

DENTAL BUILDINGS, Menlo Park, San Mateo County: Dr. M. W. Forsythe, owner; 6 suites of offices in 3 buildings, $38,824. ARCHITECT: Wm. F. Hempel, Palo Alto. 1 story construction, redwood & some brick veneer exterior. GENERAL CONTRACTOR: Schmaling & Stenbit, Palo Alto.

HOOVER GRAMMAR SCHOOL ADDITION, Burlingame, San Mateo County: Burlingame Elementary School District, owner; kindergarden & lunch room, $66,450. ARCHITECT: James H. Mitchell, San Francisco. Frame & stucco construction. GENERAL CONTRACTOR: Chas. J. Pederson, Burlingame.

DOCTORS OFFICE BUILDING, Los Gatos, Santa Clara County: Dr. A. R. Ness, owner; $21,687. ARCHITECT: Clayton Van Wagner, Oakland. 1 story, cement block and frame construction, tile roof, steel sash, concrete floor, asphalt tile, radiant heating. GENERAL CONTRACTOR: J. C. Monk & Son, Los Gatos.

BUS LOADING PLATFORM BUILDING, Reno, Nevada: Pacific Greyhound Lines, owner; $138,000. ARCHITECT: E. Keith Lockhard, Reno. 1 story, reinforced concrete, brick & structural steel roof trusses. GENERAL CONTRACTOR: Balliet Bros., Reno.

CITY HALL, Oroville, Butte County: City of Oroville, owner; offices & jail, $62,200. ARCHITECT: Thos. Paine Dunlap, Chico. 1 story, reinforced concrete construction, jail equipment. GENERAL CONTRACTOR: H W. Taber, Oroville.

APARTMENT BUILDING, Berkeley, Alameda County: Golden F. Fine, owner; 13 apartments, $90,000. ARCHITECT: Campbell & Wong, San Francisco. 2 story, frame & stucco construction. GENERAL CONTRACTOR: Sam Lipshitz, Oakland.

OFFICE BUILDING, Oakland, Alameda County: Stokely Foods, Inc., owner; $130,000. STRUCTURAL ENGINEER: J. Y. Long, Oakland. 2 story, reinforced concrete construction. GENERAL CONTRACTOR: Stokely Foods, Inc.

Rosemead High School, El Monte, California
Architects, Kistner, Curtis & Wright
General Contractor, P. A. Weeger

CLEAN LINES... that need never have a "dirty face"

When you've designed a building with clean, modern lines you don't want to see its surface become dirty and water-streaked in a few short years. The answer to that problem is to specify Adhesion Type CERAMIC VENEER Terra Cotta for the facing material. For this *quality* ceramic veneer collects far less dirt and grime...presents a perpetually clean face with a minimum of maintenance effort. And, in the designing stage, Adhesion Type CERAMIC VENEER Terra Cotta submits to the architect's pencil as readily as it will, later, to the cleaning man's brush... is available in colors, sizes and shapes to meet any design. For further information write to:

Recent Contracts also using CERAMIC VENEER...

St. Elizabeth Church
Los Angeles

J. J. Newberry Co. Store Bldg.
Bakersfield, California

Southern Arizona Bank & Trust Co.
Tucson, Arizona

Maimonides Health Center
San Francisco

N. CLARK & SONS
Division of
Pacific Clay Products
605 MARKET STREET • SAN FRANCISCO 5, CALIFORNIA

PACIFIC
Los Angeles
Portland
Salt Lake City
Seattle
Spokane

CONVENT & PAROCHIAL SCHOOL ADDITION, San Francisco: Roman Catholic Archbishop of S. F., owner; St. Anne Parish, $90,000. ARCHITECT: Vincent Buckley, San Francisco. Reinforced concrete & frame construction. GENERAL CONTRACTOR: Robt. McCarthy Co., San Francisco.

HIGH SCHOOL BUILDING, Danville, Contra Costa County: San Ramon Valley Union High School District, owner; 8 classrooms, 2 science & home making unit administration & toilet rooms, $188,200. ARCHITECT: Winfield H. Hyde & A. W. Anderson, San Francisco. Frame & stucco, concrete floors, radiant heating, asphalt tile floors. GENERAL CONTRACTOR: David Zuckerman, Walnut Creek.

BURBANK GRAMMAR SCHOOL ADDITION & REMODEL, Oakland, Alameda County: Oakland Board of Education, owner; reconstruct existing brick building & addition, 9 classrooms, auditorium & toilet rooms, $297,777. ARCHITECT: John Hudspeth & Edward D. Cerruti, Oakland. Frame & stucco construction. GENERAL CONTRACTOR: Harry K. Jensen, Oakland.

NEW GRAMMAR SCHOOL, Danville, Contra Costa County: Danville Union Elementary School District, owner; 5 classrooms & toilet rooms, $69,630. ARCHITECT: Winfield H. Hyde & A. W. Anderson, San Francisco. Frame & stucco construction. GENERAL CONTRACTOR: Allan Fuller, Walnut Creek.

LIBRARY BUILDING ADDITION, Carmel, Monterey County: City of Carmel, owner; $37,987. ARCHITECT: Robert R. Jones, Carmel. Frame & stucco construction. GENERAL CONTRACTOR: Harold C. Geyer, Monterey.

STATE PRISON ADDITION, Carson City, Nevada: State of Nevada, owner; 3rd story addition to 2 story cell block, $131,310. ARCHITECT: Ed S. Parsons, Reno. Reinforced concrete construction, will contain 20 bed hospital, ward for women, death row cells & gas chamber. GENERAL CONTRACTOR: Nevada Engineering & Construction Co. & G. Panicari, Reno.

GEO. HALL GRAMMAR SCHOOL, San Mateo, San Mateo County: San Mateo Elementary School District, owner; classrooms, kindergarten, administration & toilet rooms; $142,854. ARCHITECT: Kump & Falk, San Francisco. Structural steel frame & stucco construction. GENERAL CONTRACTOR: Wilfred H. May, Belmont.

STORE BUILDING, Pittsburg, Contra Costa County: Edmund MacDonald, owner; $27,000. ARCHITECT: Ed Mussun Sharpe, San Francisco. 2 story, reinforced concrete construction, enameled steel & plate glass front. GENERAL CONTRACTOR: Alfred P. Fisher, San Francisco.

INTERIOR COMPLETION OF AUDITORIUM BUILDING, Esparto, Yolo County: Esparto Union High School District, owner; high school, $36,935. ARCHITECT: George C. Sellen, Sacramento. Interior completion. GENERAL CONTRACTOR: Robert E. Griffin, Richmond.

OFFICE BUILDING ADDITION, Berkeley, Alameda County: California Farm Bureau Federation, owner; $341,245. ARCHITECT: Michael Goodman, Berkeley. STRUCTURAL CONSULTANT: Walter T. Steilberg, Berkeley: MECHANICAL ENGINEER: Clyde E. Bentley, San Francisco. Add 3 stories to present 2 story building, reinforced concrete construction, 3 new elevators, 1 dumbwaiter. GENERAL CONTRACTOR: Barrett & Hilp, San Francisco.

ASHLAND AVENUE GRAMMAR SCHOOL, San Lorenzo, Alameda County: San Lorenzo Elementary School District, owner; 5 classrooms, office & toilet rooms, $88,577. ARCHITECT: Dragon, Schmidts & Hardman, Berkeley. Frame & stucco construction. GENERAL CONTRACTOR: C. R. Hills, San Leandro.

NEW GRAMMAR SCHOOL. Sausalito, Marin County: Sausalito Elementary School District, owner; 14 classrooms & 2 kindergartens, administration, home economics, manual training, boiler house, toilet rooms, $374,640. ARCHITECT: Masten & Hurd, San Francisco. STRUCTURAL ENGINEER: Carl Zellner, Ross. Frame & stucco construction. GENERAL CONTRACTOR: Frank M. Crane, Ukiah, & Frank C. Brunelli, San Francisco.

MARKET BUILDING, Daly City, San Mateo County: G. Belli & Sons, owner; $27,930. ARCHITECT: Harold C. Dow, San Francisco. 1 story, 50 x 84, concrete block, wood roof trusses, roman brick & plate glass front. GENERAL CONTRACTOR: Wm. Horstmeyer Co., San Francisco.

GRAMMAR SCHOOL ADDITION, Quincy, Plumas County: Pioneer Elementary School District, owner; 3 classrooms & toilet rooms, $73,148. ARCHITECT: Chas. F. Dean, Sacramento. Frame construction. GENERAL CONTRACTOR: Fite & Stoddard, Gridley.

RESIDENCE, Hillsborough, San Mateo County: Robert. Waters, Jr., owner; $60,700. ARCHITECT: G. A. Milano & Mario Ciampi, San Francisco. Frame & Stucco construction. GENERAL CONTRACTOR. Mattock Construction Co.

6 APARTMENT BUILDINGS. San Mateo, San Mateo County: El Camino Apartment Co., owner; 73 apartments & 3 garage buildings, $450,000. ARCHITECT: Angus McSweeney, San Francisco. 2 story, frame & stucco construction. GENERAL CONTRACTOR: Williams & Burrows, Burlingame.

OFFICE & BOTTLING PLANT, Burlingame, San Mateo County: Coca Cola Bottling Co. of San Mateo, owner; $50,000. STRUCTURAL ENGINEER: Clarence Seage, San Francisco. 1 story, 10,000 sq ft., frame, stucco & corrugated steel construction. GENERAL CONTRACTOR: W. C. Tait Co., San Francisco.

OFFICE BUILDING, Oakland, Alameda County: G. E. Stolt, owner; $130,000. ARCHITECT: Leonard H. Ford, Walnut Creek: CONSULTING ENGINEER: Carl S. Replogle, Piedmont, 2 story, 100 x 150, brick & structural steel frame, steel sash, asphalt tile floors, composition roof. GENERAL CONTRACTOR: Metropolitan Builders, Oakland.

PANACALITE

The Standard for Perlite Aggregates
An Engineered Product—Engineering Service
Air Classified—Sized & Graded for Plaster, Concrete & Stucco Aggregates

Chemical, Insulation & Filter Aid Grades
A. S. T. M. Fire rating—2 hours
N. B. F. U. Accepted

a product of
Combined Metals Reduction Co.

Manufactured by
American Perlite Corporation
26th & B Sts.—Yard 2—Richmond
Richmond 4307

Concealed wiring and extra outlets are a bargain buy

Good tip for making a client happy is to include low-cost concealed wiring and extra telephone outlets in your plans. That means telephones can be moved or extensions added later on—inexpensively—without drilling holes or running wires along the baseboard.

Bedrooms, the kitchen and living room are excellent locations for built-in outlets. That's where home owners will spend most of their time... now and in the future. *For free help in planning, call your local Pacific Telephone and Telegraph office and ask for "Architects and Builders Service."*

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

IN THE NEWS

ARCHITECT SELECTED

The architectural firm of Kump & Falk, San Francisco, have been selected to design the new Funston and Santiago streets Junior High School and the Quintara and 14th avenue Elementary School for the City and County of San Francisco.

The two schools are part of San Francisco's expanded school program and will represent a cost of about $4,450,000.

SCHOOL GRANTS AWARDED

The Windsor Union Elementary School District and the Rincon Valley Union Elementary School District, both in Sonoma county, California, have been awarded state school grants in the amount of $178,768 and $106,207 respectfully, for the construction of new grammar school buildings.

J. Clarence Felciano of Santa Rosa is the architect for both projects.

TELEPHONE EXCHANGE BUILDING

The Pacific Telephone and Telegraph Company have announced plans for the construction of a new telephone exchange building in Lodi, California. Harvey P. Clark and John F. Beuttler of San Francisco are the architects.

ARCHITECT SELECTED

Frank Wynkoop and Associates of San Francisco have been selected by the Sequoia High School District of Redwood City to draft plans for a new high school building.

BOYS DORMITORY

The architectural firm of Confer & Willis of Oakland, have been selected by the Division of Architecture, State of California, to draft plans for the construction of an addition to the Boys Dormitory at the School for the Blind in Berkeley.

Cost of the project will approximate $108,900.

FRESNO AUDITORIUM

Architect Dwight Gibbs of Los Angeles, has been selected by the Division of Architecture, State of California, to draft plans for the construction of a new auditorium building at the Fresno State College.

Cost of the work will approximate $353,000.

SUPER MARKET

Bouskos Bros. of San Francisco have completed plans for the construction of a new 1-story super market building in Redwood City. The building will contain some 25,000 sq. ft. and will be of concrete block and structural steel frome construction.

DRIVE-IN THEATER

Plans have been completed for the construction of a new drive-in theater at Hollister (California), according to an announcement by Hans Severinsen, owner.

SCHOOL BONDS VOTED

Voters of Santa Rosa (California) recently approved the issuance of $890,000 for the construction of a new grammar school and additions to the High School buildings.

Selection of an architect has not been announced by the Santa Rosa Board of Education.

ELECTRIC SIGN DESIGN

Ten cash prizes totaling $1,000 have been announced by the National Electrical Sign Association in conjunction with the annual convention of the association which is scheduled to be held during February 1950.

Prizes will be awarded for the best electric sign designs submitted as a solution to a specific problem, which is a photograph of an actual restaurant. Material for entry is available from the association offices, 224 S. Michigan Ave., Chicago, Ill.

RADIO RANGE BUILDING

The U. C. Corps of Engineers, Chief of Operations, San Francisco, have rejected bids submitted for the construction of a Radio Range Building at the Castle Air Force Base in Merced county.

OUTSTANDING EXHIBITION DINNERWARE DECORATION

More than 600 designs by 252 artists representing 26 states, Canada, and Mexico were entered in the First National Exhibition of Dinnerware Decoration.

First honorable mention was given Florence Wainwright of San Francisco.

The event was held in Syracuse, New York.

AERONAUTICAL LABORATORY BIDS

The Ames Aeronautical Laboratory at Moffet Field (Santa Clara County) recently rejected a bid of $210,120 for the construction of a new metal fabrication plant.

SUPER MARKET

The M. J. King Company of San Francisco have announced the construction of a super market and 47 residences on El Camino and Maryal Drive near Sacramento. Cost of the project will exceed $400,000.

STATE GRANT APPROVED

The Centerville Union Elementary School District, Modoc county, has been granted a state fund of $92,493 for the construction of a grammar school building in Cedarville.

APARTMENT BUILDING

Plans have been announced for the construction of an 11-Apartment Building in San Rafael (California) by the Litchfield Construction Company of San Francisco. Cost of the three story frame and stucco building will be $50,000.

CENTRAL VALLEY WATER

The initial units of the Central Valley Project (California) moved one step nearer completion early this month when Bureau of Reclamation engineers put the first Keswick Dam Generator "on the line" to add to California's electrical power supply.

All three of Keswick's 25,000-kilowatt generators will be completed and in operation before the end of the year, according to W. J. McCrystle regional engineer of Sacramento.

FEDERAL FUNDS ALLOTTED

Federal funds have been allotted to the Eden Township Hospital District, near Hayward, California, for the construction of a 118-bed hospital unit, according to D. D Stone & Loy Mulloy architects of San Francisco.

ARCHITECT SELECTED

Architect C. R. Alford and associate W J. Thomas of Bakersfield (California) have been selected as architects for the new Library Building to be built in Porterville Tulare county.

CALIFORNIA MOTOR BUILDING

The California Division of Motor Vehicles have announced plans for the construction of a $3,683,000 headquarters office building in Sacramento, according to the State of California Division of Architecture.

STOLTE INC.

General Contractors

—:—

OAKLAND • CALIFORNIA

STATIONERY
SCHOOL & OFFICE
SUPPLIES
•
Printing Engraving
Announcements
•
CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

SISALKRAFT BUILDING PAPER
AND
KIMSUL INSULATION
Used on some of STOLTE, INC. Notable Building Projects

GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO • SACRAMENTO
OAKLAND • LOS ANGELES • DENVER

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

MULLEN MFG. COMPANY

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

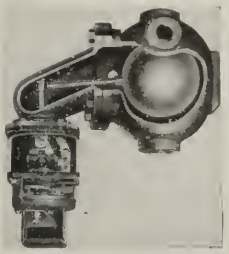
Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Fine ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO, 11

McDONNELL LOW WATER CUT-OFF FOR BOILERS

New low water fuel cut-off for automatically fired boilers carrying up to 50 lbs. pressure has been announced by McDONNELL & MILLER, Inc., Wrigley Bldg., Chicago, Ill.



Designed primarily for hot water heating boilers it can be used on steam boilers.

Will stop burner in event of low water thus preventing leaks in system, inoperative primary controls, or the prolonged opening of a relief valve in an emergency. Installs with 1" equalizing piping; combines principles of design and construction worked out in other McDonnell products.

GENERAL HOSPITAL

Architect Robert Stanton of Carmel, has been selected by the board of directors of the Mark Twain Hospital District, San Andreas, California, as the architect for the new general hospital to be built near San Andreas.

Tentative plans have already been submitted for the 75-bed structure.

NEW JUNIOR HIGH SCHOOL, Oleander Acres School, Franklin Grammar School, Merced, Merced County: Merced Union Elementary School District, owner; 10 classrooms, administration, home economics, library, music, shops, shower & locker rooms & toilet rooms; 4 classrooms, kindergarten, offices, toilet rooms, addition & remodel, $550,056. ARCHITECTS: David H. Horn & Marshall Mortland, Fresno, Koblik & Fisher, Sacramento. Frame & stucco construction. GENERAL CONTRACTOR: Larsen-Ratto Construction Co., Fresno.

NEW ELIZABETH VAN AUKEN GRAMMAR SCHOOL, Palo Alto, Santa Clara County: Palo Alto Board of Education, owner; 12 classrooms, 2 kindergartens, offices, multi-use room & toilet rooms, $237,175. ARCHITECT: Birge M. Clark & Walter Stromquist, Palo Alto. Frame & stucco construction. GENERAL CONTRACTOR: Earl W. Emley, Saratoga.

MARKET BUILDING, San Mateo, San Mateo County: 5th Ave. & B St. Syndicate, owner; $54,000. ARCHITECT: Angus McSweeney, San Francisco. 1 story, 90 x 110, reinforced concrete construction, wood roof trusses, plate glass front. GENERAL CONTRACTOR: Barrett & Hilp, San Francisco.

CLUB REMODEL, San Francisco: Chinese Sportsman Club, owner; from apartment. $13,326. ARCHITECT: Worley K. Wong, San Francisco. Interior remodel to 2nd floor. GENERAL CONTRACTOR: Clyde Construction Co., San Francisco.

SUNDAY SCHOOL & ASSEMBLY HALL, Novato, Marin County: Novato Presbyterian Church, owner; $30,000. ARCHITECT: Lloyd A. Rasmussen, Novato. 2 story, frame & stucco construction.

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS

STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS. MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING • PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

Lumber — Gypsum Wallboard
Interior Trim — Gutters
Special Moldings

The place to SAVE
is
LUMBER MANUFACTURING CO.

225 Industriel Ave. JUniper 7-1760
SAN FRANCISCO

Brownskin
VAPORSEAL
The resilient building paper creped to S-T-R-E-T-C-H
Quality Products Since 1895
ANGIER PACIFIC CORPORATION
55 NEW MONTGOMERY ST. SAN FRANCISCO 5, CALIF.
7424 SUNSET BOULEVARD LOS ANGELES 46, CALIF.
A complete line of Angier products available from your building material dealer

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Index to Advertisers

AMERICAN Perlite Corpn. 45
ANGIER Pacific Corp. 48
ARCHITECTS Reports 1
BAY Plastering Company 29
BAXTER & Company, P. H. 36
BURKE, W. J. & Co. *
HOLLENBECK-BUSH Planing Mill Co. 26
CLARK, N. & Sons. *
CLASSIFIED Advertising 43
CENTER Stationery 46
CLINTON Construction Company 38
CONTINENTAL Water Heater Co. *
DETROIT Steel Products Co. 5
DINWIDDIE Construction Co. 47
DUFFY Tile Co. 48
FULLER, W. P. Co. *
FORDERER Cornice Works 33
GLADDING, McBean & Co. Inside Front Cover
GUNN, Carle & Company 46
HANKS, Inc, Abbott A. 48
HAWS Drinking Faucet Company 32
HENDERSON Furnace & Mfg. Co. 31
HERMANN Safe Company 25
HERRICK Iron Works 47
HOGAN Lumber Company 38
HUNT Robert W., Company. 48
HUNTER, Thos. B. 47
JOHNSON, S. T. Co. *
JUDSON, Pacific-Murphy Corp. 29 & 33
KNOWLES, A. E. 28
KRAFTILE Company 30
LUMBER Manufacturing Co. 48
MARBLE Institute of America *
MASTER Plumbing & Heating Co. 28
MATTOCK, A. F. Co. 48
MICHEL & Pfeffer Iron Works Inside Back Cover
MILLER Company, The *
MONTEREY Plumbing Co. 26
MULLEN Mfg. Co. 47
NORTHERN California Electric Bureau 35
PACIFIC Clay Products Co. *
PACIFIC Coast Gas Association *
PACIFIC Manufacturing Company 39
PACIFIC Portland Cement Company Back Cover
PACIFIC Telephone & Telegraph Co. 45
PITTSBURGH Testing Laboratory 48
POOR Richerd Engraving Co. 47
REMILLARD-Dandini Co. 48
REPUBLIC Steel Corporation 39
SAN JOSE Steel Company 24
SCOTT Co. 47
SECURITY Valve Company *
SIDEWALL Lumber Co. 38
SIMONDS Machinery Company 39
SISALKRAFT Company 38
SMOOT-Holman Co. 37
SOULE Steel Company 40
STANLEY Works, The *
STOLTE, Inc. 27 & 46
SWINERTON & Walberg Co. 47
TAYLOR Co., Halsey W. 33
TOLAND, C. E., Company 25
TORMEY Company, The 47
U. S. Bonds 1
VERMONT Marble Company 39
WESTERN Asbestos Co. *
WESTERN Glass Company 28
WOOD, E. K. Lumber Company 36

*Indicates Alternate Months

Robert W. Hunt Company
ENGINEERS

Inspection - Tests - Consultation
Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities
San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

TILE CONTRACTORS

Shower Doors, Tub Enclosures
Medicine Cabinets

INSTALLATIONS OF EVERY DESCRIPTION

Modernizing - Repairing

253 Minna St., S. F. YUkon 6-1489

DUFFY TILE CO.

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

ARCHITECT AND ENGINEER

NEW WING—California State Capitol

NOV 23 1949

SACRAMENTO, CALIFORN

NOVEMBER 1949

Port of Seattle, Architect; Leose & Leighland, Contractor

It's Ceramic Veneer

for better-looking, permanent interiors

This machine-perfected terra cotta is the wall finish used in the main public rooms of the new Seattle-Tacoma Airport Administration Building, Bow Lake, Wash.

Neither time nor traffic will dim the beauty of these waiting room walls. They're faced with Ceramic Veneer, the same permanent finish used on the exteriors of the majority of larger buildings in all principal Pacific Coast cities.

For a sparkling clean interior finish, Ceramic Veneer offers large-scale surfaces, modern color and detail, and low installation costs. Maintenance is negligible because no refinishing is ever necessary.

If you would like to know all the ways versatile Ceramic Veneer can serve you and your clients, you are invited to call or visit the nearest Gladding, McBean & Co. office.

75 YEAR

CERAMIC VENEER IS A GLADDING, McBEAN & CO. PRODUCT

Other quality ceramic products include Hermosa Tru-Joint Tile, Glazed Block, Face Brick, Roof Tile, Floor and Patio Tile, Refractories, Flue Lining, Vitrified Clay Pipe, Franciscan Earthenware and Franciscan China. *Offices at* Los Angeles • San Francisco • Portland • Seattle • Spokane

• ARCHITECT AND ENGINEER

Vol. 179 No. 2

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS, A.I.A.
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

NEW WING—California State Capitol Building

The new wing addition to California's State Capitol building at Sacramento, is scheduled for completion late in December.

Measuring 268' by 265', the addition contains more than 2200 tons of structural steel, fabricated and erected by one of the West Coast's larger steel firms.

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for NOVEMBER

EDITORIAL NOTES 4

NEWS & COMMENT ON ART 9

ANNUAL CONVENTION, Structural Engineers Association of California . 10

Photo of President Harry W. Bolin 10

Resumé of Program 10

Engineering Consideration of the Los Angeles Times-Mirror Building . . 11
By D. LEE NARVER

The Steel Frame of the Los Angeles Times-Mirror Building 11
By WORRELL F. PRUDEN

NEW WESTINGHOUSE BUILDING, San Francisco 15
ALBERT F. ROLLER, Architect

MILLIRON DEPARTMENT STORE, Westchester District, Los Angeles . . 20
VICTOR GRUEN, A.I.A., Architect

A.I.A. ACTIVITIES 30

WITH THE ENGINEERS 32

PRODUCER'S COUNCIL PAGE 34
J. WILSON PEELE, Editor

HEADLINE NEWS & VIEWS 38
By E. H. W.

BOOK REVIEWS & PAMPHLETS 39

ESTIMATORS GUIDE, Building and Construction Materials 41

BUILDING TRADES WAGE SCALES, Northern, Central & Southern California . 43

CLASSIFIED ADVERTISING 43

CONSTRUCTION CONTRACTS AWARDED, General Data 44

IN THE NEWS 46

STATEMENT OF OWNERSHIP, Management and Circulation 47

ADVERTISERS INDEX 48

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4: Telephone EXbrook 2-7182. President, K. P. Kierulff: Vice-President and Manager, L. B. Peahorwood: Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year: $5.00 two years: foreign countries $5.00 a year: single copy 50c. ARCHITECTS' REPORTS are published daily from this office. Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

. EDITORIAL NOTES .

HOME COSTS

It is interesting to note the current trend in home cost.

Most popular with families having homes built to their own specifications is the house that can be built in a range extending from $6,000 to $15,000. About twenty-five per cent of those building in this range select a home costing $6,000 to $10,000 while some thirty-four per cent build in the $10,000 to $15,000 bracket.

Nearly four fifths of the families building have annual incomes ranging from $3,000 to $7,500, showing that the vast majority of families buying and building homes today are in the middle income group.

* * *

WHAT IS THIS ETHICAL BUSINESS GOING TO DO?

Time was when we went about our daily lives in something of an orderly fashion. We built houses. We built industrial plants. We built great projects. We consulted with authorized professionals and we made sure an architect or engineer was a fine, highly specialized professional with dignity and prestige. We attempted no building or construction decision, no plan, no visualized prospective without him. We had great regard for him. It was a fine thing to transfer the dream in man's mind to a blue print and thence to a business of steel and cement, and then be able to live in, work in, go up and down stairways and through doors, and in and out of elevators, all because there once had been an architect, an engineer, and a dream in a man's mind.

Then this "ethical business" sets in. Dignity can be publicised. Dignity can be secure.

The fine professions and the ethics of those professions can still be quiet, gentle and well mannered about the whole thing . . . but, will that bring in jobs, and pay bills, and inspire young college students to follow in the footsteps of the architect, and engineer . . . and be one?

With great skyscrapers all around us, beautiful homes, great housing projects, and a great new world being built . . . there stands the architect, the engineer. Quiet, silent, dignified, and modest amid the successful realization of a dream in rock, in stone, in concrete, in brick, in steel—there is the dream, and there is the smooth working product of his learning. There is progress, and civilization, and well ordered business, and a challenge fulfilled, and a living tribute to ability.

Why then, in the name of common sense is it unethical to proclaim the right to fine craftsmanship, to perpetuation of the foundation and accomplishments of a profesion which may become lost in the competition of modern activity?

* * *

STOP & GO

The emblem for our democracy should be a STOP and GO signal. We believe in giving the other fellow a chance—live and let live. Opportunity must be given a chance and that can only be done by keeping the channels of opportunity open. To clog a channel by government or free enterprise means monopoly and monopoly means curtailment of opportunity. Opportunity stopped means deterioration of democracy and freedom.

* * *

WHAT DOES THE BUFFALO ON A NICKEL MEAN?

Some years ago a young man applied for a position as an engineer with a large eastern engineering and construction firm, and when asked by the personnel director if he had any particular qualification for the position the applicant replied:

"Yes, I worked my way through the School of Engineering at the University of California by unloading sugar bags from Hawaiian steamers at the docks of San Francisco—and it taught me what the buffalo on a nickel means."

An approach to any worthwhile profession might easily begin with an intimate knowledge of the raw material of life such as personality, temperament and character, all of which serve as the vehicle upon which any technical and scientific education may proceed to an ultimate successful career.

While a desire for security is certainly understandable, fundamentally no security can be achieved without a direct relationship between satisfaction and effort which when combined produce a definite productivity.

A thorough self understanding is vital in determining a professional activity, and the complex process of adjustment in today's modern life is not easy. However, the establishment and eventual reaching of a specific objective is made considerably easier if we have learned "what the buffalo on a nickel means."

It is also well to remember in professional practice that "Behold the stone which is rejected by the builder has become the head of the corner," and that time plays an important role in the scheme of things.

NEWS AND COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., director of the California Palace of the Legion of Honor in Lincoln Park, San Francisco, has announced the following schedule of exhibitions and special events for the month of November:

EXHIBITIONS: Masterpieces of 18th Century French Art lent by Museums of France in commemoration of the Legion's 25th Anniversary; Historical Paintings by Charles Hoffbauer; French Silver and other Examples of European Decorative Arts from the Catherine D. Wentworth Collection; American Rooms in Miniature by Mrs. James Ward Thorne; Photographs by John Bertolino; Photographs of Kuanyamo-Ambo; The Heritage of the City, Prints from the Moore S. Achenbach Collection.

EDUCATIONAL ACTIVITIES: Recreational Painting Class. For children ages 4-15, 10:00 a.m. Instruction by Mr. Colin Graham and Mrs. Lilly Weil Jaffe. Adult Painting Class, 2:00 p.m. Instruction by Mr. Colin Graham. Gallery Tours: Wednesdays, 2:30 p.m. Mr. Graham and Mrs. Jaffe. Tours of the Thorne Rooms: Wednesdays and Thursdays at 10:30 a.m. Mrs. Ladusca Wilson. Fridays at 2:30 p.m. Mr. Colin Graham and Mrs. Lily Weil Jaffe.

ORGAN PROGRAMS: Organ recital by Uda Waldrop every Saturday and Sunday, 3 p.m.

FREE MOTION PICTURES: Saturdays, 2:30 p.m.

AMERICAN WAR MEMORIALS

The first public exhibition of models, drawings and plans of 15 American war memorials to be constructed on foreign soil will be shown at the Philadelphia Art Alliance, from November 1 to 28th.

The memorials, complete with chapels, sculpture and landscaping, will be erected within the next two years at permanent U. S. Military cemeteries in England, Europe, Africa and the Philippines under the direction of the American Battle Monuments Commission.

The war memorial exhibition is a significant show of close, contemporary collaboration of architects, landscape architects, painters and sculptors.

M. H. DE YOUNG MEMORIAL MUSEUM

The M. H. de Young Memorial Museum in Golden Gate Park, San Francisco, is showing the 10th Annual Exhibition of Art by the Society of Western Artists.

This Annual, which is a juried exhibition, stresses academic training. The Society of Western Artists feels that modern art has been greatly in the public eye in recent years and that the academicians have not come forward with large exhibitions of conservative art. The invitation to members included oil painting, watercolor and sculpture, and entries were received from Arizona, New Mexico and Utah as well as California.

The exhibition is comprised of 58 paintings as well as several pieces of sculpture, selected by the jury: Abel Warshawsky, noted portraitist, Alexander Fried, Art Editor of the San Francisco Examiner, Ninfa Valvo, Associate Curator of Paintings at de Young Museum, and Stafford Duncan and Herman Struck, members of the Society.

Winner of the $250 Anna Elizabeth Klumpke Prize for the best figure or portrait painting was George Seideneck for his "Cornish Fisherman." Portrait honorable mentions went to Maria von Ridelstein for "A Span of Life," C. von Schneidau for "Portrait of Alexander" and Nedra Carter for "Rosemary." In the oil painting class, First Prize went to Joshua Meador for "Mendocino Hills," Second Prize to Maurice Logan for "Sisters" and Third to Paul Lauritz for "The White Breakers, Carmel." Honorable Mention to Frank Meyers for "Mexican Objects," and Eugene M. Franzden for "A Tree in Manhattan." Watercolor First Prize was awarded to Noel Quinn for "Three Old Timers," Second to Laura Maxwell for "Still Life," and Third to Robert Paplow for "Alameda Marsh." First Prize Portrait Sculpture award to Wendell W. Gates for "Dave" and other sculpture prizes went to Kisa Beeck for "Baby Owl" and to John D. Fuller for "Adolescence."

MILLS COLLEGE ART GALLERY

A special exhibition of French Drawings from the collection of Dr. O. K. Cosla, and French Drawings and Facsimiles from the Collection of Mills College will be shown on Wednesday, Friday and Sunday, 2 to 5 p.m. until December 7th.

CITY OF PARIS

The City of Paris, San Francisco, has scheduled the following exhibits and activities for the month of November.

An exhibition of Oils and Watercolors by Suzanne de Tessen, and Wood Forms from the High Sierras by Cornelia Chase.

The Picture of the Month features in the Rotunda Gallery, will be a group of Drawings and Sculptures by Frances Baxter.

ANNUAL CONVENTION

Structural Engineers Association of California

A RESUME' OF THE PROGRAM AND EVENTS AT THE ANNUAL CONVENTION IN YOSEMITE VALLEY — OCTOBER 13 - 14 - 15 - 16, 1949

The Annual Convention of the Structural Engineer's Association of California in Yosemite Valley was very gratifying. The attendance of about 350 far exceeding expectations. The program was all very well conducted and attended.

The convention was opened by Mr. John A. Blume, President of the Structural Engineers' Association of California. Reports were read from the Secretary-treasurer, the Board of Directors and the several State Association Committees.

The first technical session was on the subject of "Foundation Problems and Solutions" presided over by Harry W. Bolin, President of the Structural Engineers' Association of Southern California.

The Subjects were discussed from various standpoints by engineers who had given considerable study to the topic. The talks were illustrated by diagrams, blue prints and charts. The subjects and speakers were as follows:

Application of Soil Mechanics to the Investigation of Foundation Soils by Trent R. Dames.

Foundation Problem, Utah Power and Light Co., Salt Lake City Steam Electric Station by Walter L. Dickey.

Foundations of the Prudential Building, Los Angeles by L. T. Evans.

NEW PRESIDENT

HARRY W. BOLIN
Structural Engineer

Newly elected president of the Structural Engineers Association of California is with the State of California, Department of Public Works, Los Angeles.

A Practical Analysis of an Unusual Foundation Problem by Murray Erick.

Examples of Foundation Analysis, Buildings at Point Mugu by F. J. Converse.

Examples of Foundation Structural Design and Economics by John Mendenhall.

Use of Basements to Reduce Differential Settlements by W. H. Jervis.

Leon C. Bibber, Chief Research Engineer, Carnegie Illinois Steel Corporation, an acknowledged authority on the subject, delivered a very comprehensive talk on the technical refinements of welding.

D. Lee Narver, W. F. Pruden and D. C. Willett also spoke on this welding panel, moderated by Ernest D. Francis, President of the Central California Association.

Jesse Rosenwald, President of the Northern California Association moderated the panels on Public Relations and Legislation. The Public Relations Committee—H. C. Powers, Chairman—presented a Proposed Brochure for the State Associaton. H. J. Brunnier being in South America was unable to report for the Committee on State Liaison, which was later given by George E. Brandow of the Southern Association. The Legislative section of the program was highlighted by a very constructive talk by Anthony J. Kennedy, Attorney for the Joint Legislative Council. Harold B. Hammill and J. G. Wright supplemented Kennedy's talk with very constructive suggestions on legislative matters for the future.

Mark Falk's Report of the Legislative Committee included a recommendation "of far reaching importance" for establishment of a State Building and Safety Commission. This was referred to the Resolutions Committee and when final action by the Board of Directors is taken, will be released.

Arthur B. Smith, President CCC AGC, was featured as a guest speaker on the panel on Building

(See Page 28)

ENGINEERING CONSIDERATIONS OF THE LOS ANGELES TIMES-MIRROR BUILDING

By D. LEE NARVER*

Growth and expansion of the "The Los Angeles Times" and the new enterprise "The Mirror" have resulted in the present construction of a new building ten stories in height with three basements, 120 x 165 feet in area, at Second and Spring Streets, adjoining the original building and plant section. The architect, Rowland H. Crawford, created a design of simplified modern architecture of unusual interest and treatment. Holmes & Narver performed all the engineering for the project; Consolidated Steel Corporation, now Consolidated Western Steel Corporation, was the steel fabricator and erector; L. T. Evans was foundation consultant; and P. J. Walker was general contractor.

EDITORS NOTE: *This paper was presented by Mr. D. Lee Narver of Holmes & Narver, Inc. Engineers, Los Angeles, before the Annual Convention of The Structural Engineers Association of California at Yosemite Valley on Oct. 14, 1949.*

Extension of the "Times-Mirror" presses and expansion of the Publishing Department called for the use of the three basements and first five floors for these purposes. The upper floors are for office rental space but designed for ultimate occupation by the newspaper. The black-and-white presses require a head room three stories high and space sixty-eight feet wide. To give this clear space, the building columns above are supported on heavy girders and the wall column in the old building was cut off and picked up on a girder spanning between two adjacent columns. This necessitated revising those columns and their footings. The massive press foundations are independent of the building foundations. The loading concourse on Spring Street was extended into the new building at the first-floor level a distance of 42 feet, with a depth of 45 feet, one story in height. Because of this, the building columns above the concourse

(See Page 12)

THE STEEL FRAME OF THE LOS ANGELES TIMES-MIRROR BUILDING

By WORRELL F. PRUDEN*

In playing its part in the construction program just described to you by Mr. Narver, Consolidated Steel Corporation, as it was then known, enjoyed an opportunity to participate in one of the most unusual and interesting structural steel jobs ever undertaken in this area. The architectural demands, requiring unconventional structural design, posed many problems for the steel fabricator and erector; technical problems over and above the burdens which plagued us all during the period immediately following the last war when materials were scarce, and labor problems were again coming to the fore. Mill rollings, now scheduled on a 60-day basis, could not be arranged to begin less than 5 months from date of order on this project and then extended over a period of 7 months due to limited allotments of critical wide flange shapes, and strikes by coal miners and the maritime workers. These events are all part of the story of the Times Mirror Building Addition, but I know this audience is more interested in the engineering and construction phases of the work.

EDITORS NOTE: *This paper was presented by Mr. Worrell F. Pruden, Chief Engineer of the Consolidated Western Steel Corporation, Los Angeles, before the Annual Convention of The Structural Engineers Association of California at Yosemite Valley on October 14, 1949.*

The steel from of the building consisted of approximately 3300 tons of structural shapes, the greater part of which were wide flange sections. For fabrication and erection purposes the structure was divided into 7 tiers. Considerable time was spent in the early stages of the structural steel contract in discussions between the design engineers and the engineering and operating personnel of our fabricating organization. This included particularly those persons who were most familiar with welding techniques. These discussions were valuable in developing the most practical designs, from the viewpoint of the fabricator, which could be permitted under the overall limitations imposed by the basic design requirements.

Two distinct types of construction were employed in the steel frame. The first two tiers, comprising the basement, first, second and third floors, were of conventional riveted design with standard beam to column connections which accounted for approximately 800 tons of the total weight. Further mention of the fabricating and erection procedures

(See Page 13)

D. LEE NARVER

area are also supported on heavy girders and again a wall column of the old building cut and picked up at the second floor line. The wall column in each of these cases was carried on a pin supported truss to avoid creating a stiff local element. Most of the three lower floors and basements are for use in connection with the printing process activities and have been designed for a live load of 250 pounds per square foot. The floors above the third are all designed for normal office occupancy.

The building was designed under the provisions of the 1945-46 Los Angeles City Building Code, which required a horizontal seismic factor of 13⅓% of the dead load applied at the top level. This factor decreases by increments to approximately 5% at the lower floors. Due to the fact that the basement floors are utilized in almost their entirety for production of the newspaper, much heavy equipment such as the air conditioning equipment, in addition to the cooling tower and house tanks, is in the penthouse. Due to these heavy roof loads, the horizontal seismic force under the Code applied at the roof level is 1,500,000 lbs. At the third floor, this load is 2,670,000 lbs.

The group of buildings is naturally divided into three components—the taller part of the "Times" building, the lower Plant Section and the new 10-story "Mirror" building. The difference in period of these three major units indicated that they be separated by earthquake joints. The design of the "Times" building by Murray Erick included a slip joint between the taller part of the "Times" building and the Plant Section, and we provided one between the Plant Section and the "Mirror" building.

Structural steel was employed for the framework of the building. The exterior walls are concrete, faced with stone, except the removable panels in the west elevation which are of reinforced brick construction. These panels were made removable to provide for the possible future extension of the building westerly with no separation walls. A two-way concrete joist system was used for the floor framing. The column spacing is quite irregular but approximates 23 feet on centers both ways.

Studies were made of the structural framing required to supply sufficient vertical wall elements to resist all of the horizontal forces. Such a design would have saved some steel and the frame could have been a riveted structure. However, it was decided by those responsible for space planning that overall economy was in favor of the continuous window design and as small a vertical element as possible. Due to this desirability of continuous windows above the third floor for lighting and flexibility of internal partition arrangement, there were no vertical wall elements and structural wall bracing could not be used above that floor. The only permanent interior walls available in the building for seismic bracing were those enclosing the elevators and stairways. These seemed impractical to use for this purpose because the horizontal shear in the 10th story would have required 18-inch thick walls which increased to approximately 33 inches thick in the 4th story. Then, too, the anchorage of foundations of these walls would have been extremely difficult, if not totally impracticable. Considerable stiffness could have been designed into the east wall; however, since no stiff counterbalancing elements were available elsewhere to bring the center of resistance sufficiently into line with the center of thrust, it was not possible to utilize it. Therefore, all of the horizontal loads were taken in the steel frame through moment resisting connections between beams and interior columns and between trussed spandrels and columns in the exterior walls.

Below the third floor, sufficient vertical concrete wall area was available to take all of the seismic shear. The steel frame up to this level is of conventional design, using standard "H" column sections and standard riveted beam-to-column connections carrying static loads only.

Since approximately equal strength was required in both directions of interior columns above the third floor to absorb the lateral forces, they were made up of two 24-inch "Wide Flange" sections. One section was cut in the center of the web forming two "T" sections. The stems of these "T's" were welded to the web of the other 24-inch beam to form a cross type column 24 inches by 24 inches, with four flanges available for beam connections. Exterior wall columns were formed by riveting one flange of a 14-inch "H" section to the web of a "Wide Flange" beam.

By utilizing the full spandrel depth for a riveted truss with moment connections to the columns, the relative stiffness of an exterior wall bent to that of an interior bent was made to approximate two and one-half to one. The horizontal seismic shears were distributed to these elements in that ratio.

Due to the magnitude of the moments induced in the bents by the seismic shears, it was found that relatively heavy floor beams were required in both directions for these loads alone. In loading these beams equally with the two-way concrete joist floor framing, it was possible to take the static floor loads with little increase in beam weights over that required for seismic moments alone. This also made possible the use of similar beam connections on the four flanges of the columns; and this type of floor provided a strong

(See Page 14)

WORRELL F. PRUDEN

on that part would prove monotonous. The structure above the third floor, consisting of approximately 2500 tons of structural shapes, is a distinct departure from ordinary strucural design, not only because of its being entirely welded but because of the unusually intricate connections which were necessitated by the loadings on the structure.

Mr. Narver has described for you typical arrangements of some of the welded beam to column connections. These connections were arranged in such a manner that for the most part all floor beams became essentially plain cut to length material for the shop. The arrangement of continuity plates and seat brackets was such as to permit a length tolerance of ¾" in these beams, thereby greatly simplifying the fitting of such members which are frequently arranged for close fits in some types of welded design. Small connection angles were bolted to the webs at the ends of the beams to steady them after being landed on the seat brackets and before welding in the field. Bolting through the bottom flange to the seat bracket for this purpose was impractical due to interference with the welded continuity plates.

The fabrication of the columns brought out shop techniques which I believe are unique in the structural steel fabricating business. There were 371 columns in the building, 53 in each of the 7 tiers. The typical interior starred cross section was made up of two wide flange shapes, generally 24" sections of various weights. The splitting of one section to make two tees was performed by using conventional oxyacetylene cutting torches. This process, however, warped the pieces so that they had to be accurately straightened to provide the required fit up before welding the webs together at the center of the star.

Proper welding sequence and positioning played an important part from this point in the shop fabrication. The uncut sections were placed in a fixture with the webs vertical and the tee sections fitted to each side. Welding was started simultaneously from each side with two welders beginning at the midpoint and traveling in opposite directions. Intermittent welds, 2½" long, 6" on centers, were specified. In the first welding position only 50% or alternate welds were laid. This technique allowed the uncut beam to resist strains from welding shrinkage by applying them in the direction of its greatest stiffness and held distortion to a minimum by applying only 50% of the weld in the first position. The assembly was then rotated 180° and welding again started from the center, progressing simultaneously in opposite directions from both sides but now applying the full specified weld. The assembly was again turned over and the remaining weld applied to the original side.

The resulting straightness was very satisfactory. Positioning for these longitudinal welds in the columns was quite simple. Positioning for the floor beam connections was not so simple.

In addition to the problems resulting from the usual desirability of positioning for speed and ease of welding, the fabrication of these connections was further complicated by the very limited success which was afforded the welder by having to work between the flanges of the starred sections. This opening was not large enough to accommodate the welder's helmet so that in many cases it was extremely difficult for him to see his work. Cover plates, where they were required on the webs of the starred sections between diaphragms, were fitted and welded in place first.

The welding of these plates introduced some interesting details. At the center of the starred column these plates fitted against each side of the longitudinal fillet weld holding the starred section together. This weld was made continuous between the diaphragms at the floor connections. Welding of the cover plates was, therefore, superimposed upon this fillet weld. Due to the restricted access a square edge with 45° fillet could not be used. The cover plate edges were beveled to a 22½° angle so that when placed in position at right angles to each other the beveled edges produced a wide V groove with 45° included angle, the width at the base of the groove being the hypotenuse of the longitudinal fillet in the columns. Gas escape holes were provided in these covers because they were completely sealed by the welding around their perimeter. Welding progressed simultaneously on both sides of the columns and at both floor connections where two floors framed into a single tier. This technique employed throughout the shop and field welding permitted the use of four welders on each column, thus helping to compensate for shrinkage and allowing the maximum number of men to work efficiently on the job.

The preparation, fitting and welding of the diaphragms was probably the most difficult part of the work. Proper fitting was, of course, essential. It was first proposed to fit each diaphragm in two pieces by splitting it diagonally through the center. Although this might have simplified inserting the piece through the narrow opening, it would have greatly complicated accurate alignment and fitting of the two separate pieces and would have added a large amount of welding. Accordingly, each plate was flame cut to approximate size after which it was machine beveled to insure accurate fitting.

(See Next Page)

D. LEE NARVER

(From Page 12)

diaphragm for the distribution of seismic shears to the resisting elements.

The steel contractor was selected prior to the start of final design. This made it possible for the designers and fabricators to confer on matters of detail and relative costs. This also gave us knowledge in advance of the shop practices of the fabricator, which aided in design of detail. These features will be more clearly described by Mr. Pruden in his paper on the shop and field welding problems (See accompanying article).

Story heights and ceiling heights were such that it was impractical, in the space available, to develop the moments involved at column joints by means of riveted connections. It was, therefore, necessary to employ welded beam-to-column connections to conserve space. Beams were connected to columns by means of top and bottom flange plates butt welded to the columns and fillet welded to the beam flanges. Conventional welded beam seat brackets were shop welded to the column flanges to take all vertical shear. To prevent the butt welds on the flange plates from assuming any of the vertical shear, the fillet welds connecting the top and bottom plates to the beam flanges were kept back some distance from the face of the column to allow flexibility for vertical displacement. The lower flange plate connection was made with two plates resting on the upper side of the beam flange on both sides of the beam web. This arrangement made it possible to make all field welds from above in a horizontal position.

Plates to provide continuity of stress through the column section at the levels of the top and bottom beam plates were welded in the shop to the column flanges and webs.

Perhaps a few figures will convey a better idea of these connections. The beams in all four directions in this typical case are 21 WF 112 lbs. and the column is made up of two 24 WF 145 pound sections.

The total moment is 415 foot kips which, divided by the 1.75 depth of beams, gives 237 kips at top and bottom plates. This on the top plates, using 13,000 lbs./sq. in. weld value, requires 18-2/10 sq. inches of weld, which was made by using 1¼" x 15" of single bevel butt weld.

The fillet weld tieing the plate to the top flange of the beam totalled 48" of ⅝" bead.

The general sequence of welding beam-to-column joints was from the center of the building outward in all directions to the exterior walls. All floor beam connections to any one column in a tier were made before going on to the next column. This sequence of welding in all directions toward "free" ends in each column tier was adopted to minimize "locked up" stresses in the members of the framework.

Constant welding inspection was employed throughout the construction. During the welding operations, spot tests were made by chipping and also by X-ray. Generally, all welds were made using backing up strips, but in some instances these strips were not used and the tests indicated the value of backing up strips.

I have attempted to set forth only the fundamentals involved in the design of the steel frame of this building, endeavoring to show the factors that determined the selection of a welded steel structure for the upper seven stories as well as the principles relating to the solution of the problems. The detail of carrying out the design into a physical structure I leave to my good friend and most helpful collaborator Mr. W. F. Pruden, Chief Engineer of Consolidated Western Steel Corporation.

WORRELL F. PRUDEN

(From Preceding Page)

Due to the heavy thickness, up to 1½", a single J groove would have been most economical; however, the restricted access made it necessary to open up the groove to a straight 45° bevel with ⅛" root face in order for the welder to be able to satisfactorily see the root pass of his weld. The additional welding rod required to fill these 45° bevels was very considerable and added many welding hours to the job. Fitting of these diaphragms was complicated by the restricted location, their heavy weight, and the variation in the tolerances in the rolled shapes. Fitting was further complicated by the fact that to obtain better delivery schedules it was necessary to use a combination of Carnegie parallel flange beams and Bethlehem tapered flange beams.

To make this difficult welding job as easy as possible we made use of a large assembly pit in our structural shop. This pit covered an area of about 13' x 50' and was 15' deep. By standing the columns on end in the pit and placing scaffolding around them at the elevations of the floor beam connections we were able to perform all welding of the diaphragms in the downhand position, thereby greatly simplifying a job which would otherwise have been virtually impossible to accomplish with any degree of quality in the finished weld. Control over welding sequences was rigidly

(See Page 35)

NEW WESTINGHOUSE BUILDING

San Francisco

ALBERT F. ROLLER, Architect

BARRETT & HILP, General Contractors

The Westinghouse Electric Corporation's new three story building at 410 Bush street in San Francisco, now provides a thoroughly modern, centrally located, office headquarters for the company's engineering, sales, and executive personnel in charge of the Pacific Coast District area which covers the eight western states plus Alaska and the Hawaiian Islands.

The building contains some 40,000 sq. ft. with a 40 ft. front on Bush street and extends from Bush to Pine street a distance of approximately 215 ft. An alley runs along the East side of the building for the full length.

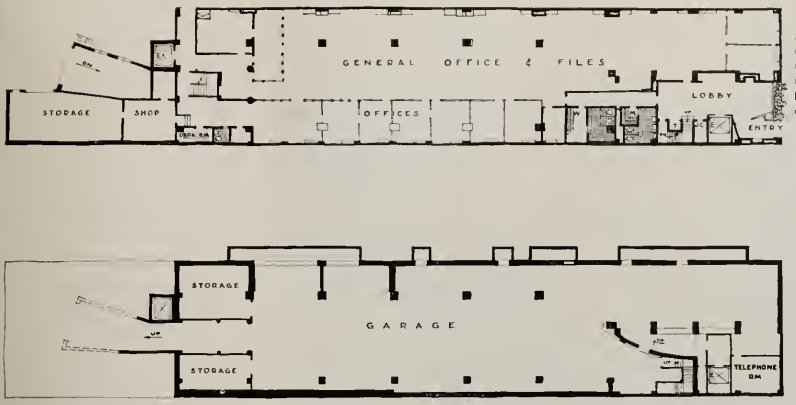
The new quarters affords ample space to meet current and immediate future office space requirements and fills a long need for consolidation in one downtown, central location, of the western executive and office personnel of many of the company's departments and divisions. For many years it has been necessary for these groups to maintain

STREET ENTRANCE:

The clear plate glass and tempered glass doors make a good transition from the street to the interior lobby . . . corrugated glass back of flowerbox affords privacy for clients and information desk in lobby without sacrificing open effect of large glazed wall. Light is diffused by satin finish of corrugated glass so that no Venetian blinds are required . . . note aluminum grid light through over window.

BUSH STREET ELEVATION . . .

Takes full advantage of the three story height for simple and dramatic use of Westinghouse trade mark sign . . . the light grey stucco blank wall makes ideal background, while deep blue terra cotta panel matches porcelain enamel sign.



FLOOR PLAN . . . showing arrangement of First Floor (top) and Basement (below).

offices in six scattered downtown San Francisco buildings. The new quarters now enable the company to serve the Pacific Coast District more effectively.

Some branches of the company are not affected by the new building such as the Westinghouse Electric Appliance Division and the Westinghouse Electric Supply Company, both of which will remain in their present well established locations.

BUILDING COMPLETELY REDESIGNED

The building was formerly occupied as the old St. George Garage and provided business district parking for automobiles on all four floors. Access to the three upper floors was by an elevator located at the rear of the building, while the basement parking facilities were reached by a concrete ramp leading from the Bush street level.

Architect Albert F. Roller has completely redesigned the building.

There is no trace of the previous "garage" atmosphere. The entire interior has been completely modernized from basment to and including the roof. New facilities provide spacious, appropriately lighted and well ventilated offices and general work areas; a space for storage of company automobiles in the rear of the building on the Pine street side, while facilities have been provided for a company-employee lunch and sun room on the roof.

The main entrance lobby on Bush street offers

DEMONSTRATION ROOM:

Ceiling mounted fluorescent lights have aluminum grids—double spotlights at end of each row of strip lighting. The fiberboard tile ceiling reduces noise.

Utility room for demonstrations and general sales meetings seats about fifty persons. All film used in illustrated talks is 16mm type, thus eliminating the need of special fire precautions necessary for the 35mm nitro-cellulose type of film . . . portable screen is put away when not in use.

STAIRWAY:

A bleached oak cap has been placed on the metal rail . . . treads and landings are of terrazzo.

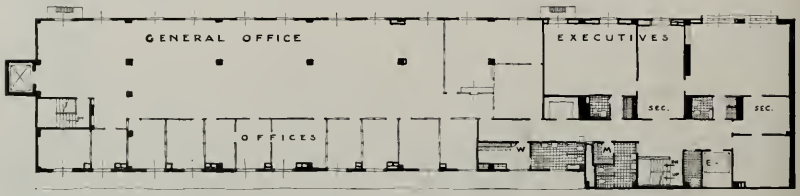
The rails and sidewalls are of canary yellow . . . the rear wall is of light umber.

both clear and fluted plate glass which runs to ceiling height, while a blue glazed terra cotta base along the flowerbox has a corrugated surface. Planting gives a friendly atmosphere to the entrance. The interior has been attractively conceived in the use of color hardwoods and shadowboxes for the display of many smaller products manufactured by the company. Painted walls are in canary yellow and desert sand. A mural decoration on the ground floor provides a back ground for the information desk. A rich brown asphalt tile floor and a brown wall at the back of the stairs complete the public entranceway.

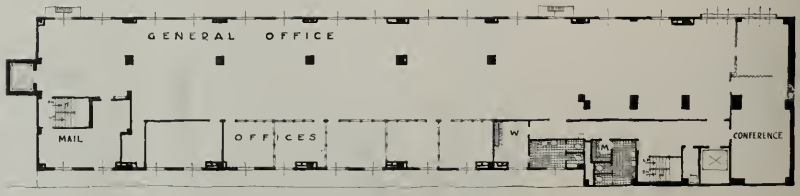
OFFICES

Walls in the chief executive offices have been finished in harmonious hardwood veneers, and the floors in this area are covered with neutral tone wall-to-wall carpeting. A considerable

FLOOR PLAN . . . showing general utility arrangement of Third and Second floors.



3RD FLOOR



2ND FLOOR

RECEPTION OFFICE:

Located between top executive offices on the third floor . . . is finished in brown carpeting, bleached mahogany doors, canary yellow walls, beige and green drapes, and a neutral tone fiberboard tile ceiling.

Semi-direct fluorescent fixtures have opalescent sides and aluminum grids.

amount of flexibility has been maintained by the architect in all of the secondary offices by the use of movable, glazed metal partitions.

Small cloak rooms serve as buffers between the various offices, and here too, cheerful color schemes have been carried out. The washrooms are all wainscoted in glazed ceramic tile.

A thoroughly modern automatic elevator which requires no operator, and has been finished in blue enamel, serves the four stories.

The street floor houses offices for the Westinghouse Lamp, X-Ray, Elevator and Sturtevant Divisions as well as those of the company's export-import organization, the Westinghouse International Company. Apparatus sales department personnel and activities occupy the entire second floor. The Pacific Coast District executive offices are located on the third floor, with those of the engineering and service, sales promotion, treasury and public relations department.

FILE ROOM:

Fixtures for continuous fluorescent lighting are semi-direct type with opalescent glass sides and aluminum louvered grid.

Secondary Executives offices are shut off from main office space by movable metal partitions, approximately seven feet high, glazed in upper portion with obscure glass.

Francis Steuart, Photos

William Eccles, Air Photo

MILLIRON DEPARTMENT STORE

Westchester District, Los Angeles

DESIGN: Victor Gruen, A.I.A., Architect

ASSOCIATE IN CHARGE OF PROJECT: Karl Van Leuven, Jr.

CONSULTANTS:

Kourken Bardizbanian, Structural Engineer
John J. Cullinane, Mechanical Engineering
Hilberg, Byler & Hengstler, Mechanical Engineering
H. L. Deitz, Electrical Engineering
Foster K. Sampson, Electrical Engineering

ARCHITECTURAL SUPERVISION:

Max Reder Horwitz, A.I.A.

GENERAL CONTRACTOR:

McNeil Construction Company

Slightly to the southwest of the City of Los Angeles, in a semi-residential area known as the Westchester District, the real estate development firm of Frank H. Ayres & Sons have planned and started to develop a seventy-two acre diversified shopping center which will not only provide adequate merchandising and marketing facilities for the housewife and average family, but will also take care of the traffic problem in that provision has been made for the easy and convenient parking of some 3500 automobiles.

The overall plan calls for stores to be set along a highway in a strip 500 ft. in depth, with an additional 350 ft. being devoted to car parking areas, and even with this liberal consideration of car parking the construction of the new Milliron Store presented a need for additional parking space as the store building required a space twice the standard depth and would therefore leave little space for parking.

Therefore in designing the new Milliron department store, the architectural firm of Gruen and Krummeck supplemented the ground car parking area with convenient roof parking. Unique as the roof parking may be, it is but one of numerous "new ideas" created by the architect.

In the first place the store was designed in all its parts by Gruen and Krummeck. Contrary to the generally accepted thought that large department stores, or other large buildings, are designed by different people as far as the exterior, the interior, the furnishings, the fixtures, the decor and different parts are concerned, the architect felt that contemporary architecture, in contrast with traditional architecture, need not recognize the facade and the interior under separate units. Therefore the architectural firm created the structure of the building, the custom designed store fixtures, the hand picked furniture and drapes, and even the china for the restaurant.

They selected the colors used throughout the building, the plants, and the lighting fixtures. A job that took nearly two years to complete—from the beginning of the design to the completion of the building—but, the final result is an outstanding and completely integrated project, each part of which is in full harmony with the other, and a product which has commanded international recognition in the field of architectural design and in modern department store arrangement.

MULTI-FLOOR IN ONE LEVEL

The design of the store is horizontally organized

VIEW OF ROOF RAMPS from Rear Parking Area *Julius Shulman, Photos*

MILLIRON STORE . . .

DRIVE-UP
CAR PARK

Twenty foot wide, one way ramps, provide safe and easy access to and from the roof where ample facilities are available for auto parking.

Also located on the terrace is the Beauty Shop and Restaurant which are just a few steps from the main room entrance to the store.

BELOW

Is a view of the store entrance from the rear parking lot which leads into the Rose Store . . . the entrance and exit ramps to the roof form an overhead protection from adverse weather conditions.

instead of vertically like the usual department store. Its entire selling area is concentrated on one level in areas 300 ft. by 300 ft., and this area is then organized into five distinctly shaped areas comparable to different floors of the usual large department store.

Around the two escalators and large stairways leading to and from the roof is the area which usually would be called the first floor. (See Floor Design and Plan on Page 27). It is called the Center Circle and contains all of the merchandise groups which a shopper normally finds on the main floor of a department store. From this main Center Circle four different colored quadrants branch out, each quadrant and color representing another "floor" or store.

One of the quadrants is called the Rose Store and is devoted exclusively to the display and selling of women's apparel; another "floor" is designated the Green Store and is limited to the handling of men's, boy's and children's wear and accessories; the third quadrant is known as the Blue Store and features major home appliances, furniture, and other household items; while the fourth quadrant is called the Yellow Store where household goods such as drapes, bedspreads, and a wide variety of miscellaneous items are displayed and sold.

All promotional material, newspaper advertising, radio advertising, and direct-by-mail sales promotion campaigns carry out the color scheme and various items featured in the sales effort are identified with the particular color store in which the item is located within the store.

ROOF IS SIXTH FLOOR

The roof area has been designed into three independent departments. Facing Sepulveda Boulevard (See aerial photograph on Page 20) has been located the Terrace Beauty Shop, The Penthouse Drive-Up Restaurant and the Auditorium, and for the first time a large department store will be able to open these features to their customers and the public outside of the hours when the balance of the department store is open.

As access to these three departments is from the Roof Car Parking area, as well as from the ground floor through the store, the Restaurant will remain open during the evenings and on Sunday's. The Beauty Parlor will keep late hours as a service to those customers who are unable to visit a beauty shop at any other time, and the Auditorium will be made available to the use of local clubs, civic groups, churches, and other community groups who seek a convenient, centralized meeting place, at all times.

The Penthouse also provides a special nursery where mothers may park their children during the time they are in the store shopping.

VERTICAL CONCRETE FINS support overhanging concrete roof . . . brick walls.

DRIVE-UP DEPARTMENTS

For the first time a large West Coast department store building features as a part of its customer facilities a Drive-Up floor, which in this instance is the roof. Here are located the Beauty Shop, Restaurant, Auditorium, children's nursery and a large scale automobile parking area, adequate to take care of more than 220 cars at one time. The driveway ramps are one way routed traffic, with 20 ft. widths, and smooth surface so that no woman shopper need be frightened at driving her car from the street level to the roof and right to the door of the Beauty Shop, the Restaurant, or the Auditorium. Customers may also park their cars on the roof and use the main entrance to the store, which is located in the center of the roof, and may actually enter the store via an escalator, or a wide stairway, which leads down from the roof to the Center Circle store. (See page 22 for illustration of parking ramp entrance).

The roof area will present an attractive and unique area when landscaping at the entrances and redwood plant boxes along the sidewalls have been provided.

RAMPS AND PARKING

In designing the drive-up to roof ramps the architect did everything possible to make them as comfortable and safe for traffic as could be done. Even though each ramp has the extra width of 20 ft., which is considerably more than ample width for any tppe or make of automobile, it serves only one lane in one direction of traffic. One ramp is used exclusively for up traffic, the other for down traffic. Traffic is organized on the roof for orderly flow in and out, and for parking of vehicle while customer is using the facilities of the store. (See view of Ramps from Parking lot on Page 21.)

Present arrangements provide for the parking of 220 cars on the roof at any one time.

In addition to the roof parking, two additional parking areas are available. One is behind the West side of the store and the second area is to North of the store. The combined parking facilities provide for more than 900 cars at a time.

EXTERIOR

The outside appearance of the store presents a different view from any other store ever built, and according to the Architect Victor Gruen, "It represents a true expression of contemporary architecture". The structure expresses itself clearly at the first glance—the vertical concrete fins form the actual structure, carrying the ceiling and the overhanging roof, which create, at the same time. an

A DEPARTMENT STORE WITHOUT SHOW WINDOWS in the traditional sense.

interesting rhythm for the exterior treatment. (See illustration on Page 23).

The walls between the fins have no particular structural meaning, but are only there to protect and separate the inside from the outside. They are made of brick and have been left in the natural appearance. The concrete roof itself hangs over in order to afford protection for the windows. The brick wall ends in a flower box treatment around the base of the building. On the North end, the treatment of the exterior terminates in a tower like structure carrying the large sign "Milliron's" and, at the same time protecting an exterior stairway leading from the sidewalk to the roof.

On the West side of the building the exterior treatment ends when the overhanging roof ledge is carried down vertically, marking the entrance to the up-ramp. The West exterior treatment is one of the most interesting as it is formed by the two ramps which cross each other in a scissor-like fashion (See Page 21). The ramps are supported by slim posts and their construction is left uncovered, revealing the beauty of its engineering features.

The North side takes into consideration that at some future time neighboring buildings may be erected immediately adjoining, and therefore the treatment of design and construction is carried out in simplest form.

NO SHOW WINDOWS

One of the unique and unusual features of the new building is the fact that there are no usual type show, or display, windows in the traditional sense.

The building is set back about 25 ft. from Sepulveda Boulevard and has no openings besides the impressive main entrance in the middle of the building, facing the Boulevard, and a corner entrance on Sepulveda and Eighty-eighth street; an entrance direct from the rear parking lot; and an entrance from the north parking lot.

Instead of the traditional show windows, the architect features four unusual display buildings which are in themselves independent of the main building and yet blend themselves into the landscaped area along Sepulveda Boulevard. The display buildings are set at an angle so that people driving along the Boulevard can get a glimpse at the goods displayed without turning their heads and distracting their attention from safe driving. Each display features large plate glass windows and brick walls. The areas between the display

ROOF and MAIN FLOOR are connected with two escalators and 40′ stairway.

buildings will be taken up by trees, bushes, and flowers, and rest benches and announcement boards. (See illustration Page 24).

INTERIOR

The interior of the building, as previously described, represents a large wheel with the hub the main center of activity and the spokes supplemental stores. All fixtures and display facilities have been carefully selected, or designed, to serve a specific purpose.

The main area is lighted by some 650 indirect dome lights which give ample lighting to all parts of the store. Ventilation is by an automatic mechanical system consisting of an intake and exhaust set-up. Heat is furnished by individual unit heaters placed in various strategical positions, some of these are partially electric and others are partially gas fired.

Along the West side of the building there is a 300 ft. basement used for storage. The storage area also extends to a portion of the first floor and a mezzanine area which are all connected by a freight elevator. Loading takes place along loading ramps with space for four large trucks on the northwest corner of the building. There is a 200 ft. long mezzanine along the South wall containing large lounge rooms for employees, also lockers, toilets, and a lecture, or conference room.

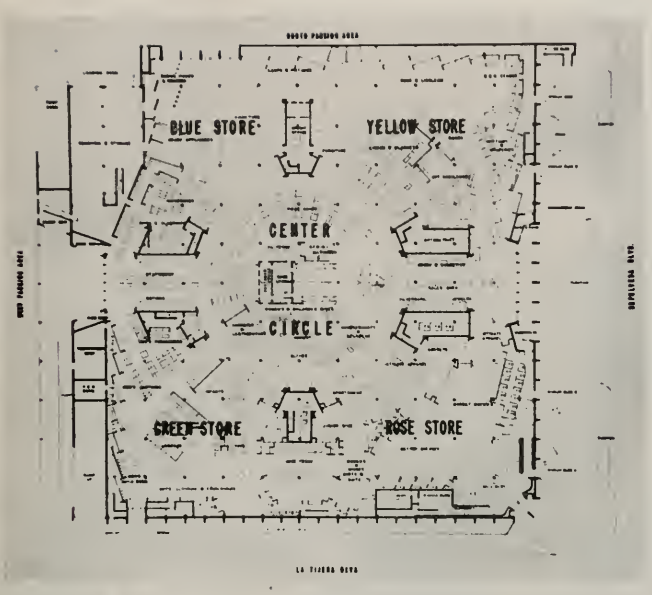
Special provision has been made for general operational utilities such as rooms for electrical transformers, maintenance, management, and special customer services.

Within the 90,000 sq. ft. there are constructed six small buildings which the architect calls "the pylons". These pylons have a number of functions. Each consists of first floor and mezzanine and tend to organize the space into the various separate store activities; they also contain the "backstage areas" such as fitting rooms, managers office, and other necessary operational features.

SPECIALITIES

The Penthouse Drive-Up Restaurant is surrounded by glass with an excellent view towards the Los Angeles Municipal Airport where customers may

SPECIAL DISPLAY FIXTURES and indirect dome lighting emphasizes friendliness.



DESIGN FOR CUSTOMER CIRCULATION THROUGHOUT NEW STORE

The general shopper circulation throughout the store, as estimated by the architectural firm of Gruen and Krunmeck, anticipates as many customers will use the central entrance from the roof, as will use either the rear parking entrance or the front main street entrance.

The symmetrical, radiating layout of specially designed fixtures is quite unusual as far as the modern department store design is concerned, in that it represents a series of departmental free-form islands each of which is complete within itself.

The center circle, with the greatest traffic, contains the merchandise normally found on the ground floor of a department store: the Rose Store (lower right) is for women's wear; the Green Store (lower left) is for men's and children's wear; the Blue Store (top left) is for appliances and furniture; and the Yellow Store (top right) is for other household goods.

watch aircraft landing and taking off. Redwood railings with sub-tropical planting, unique lighting fixtures which light individual tables; a 40 seat lunch counter and other attractions feature the restaurant which will serve about 200 people at a time.

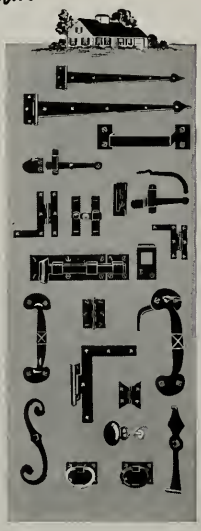
The Auditorium, which will be used for fashion shows, lectures, and community events, has a seating capacity of about 250 people. Provision has been made for a small stage and a projection room.

The Children's Nursery, located between the Auditorium and the Beauty Parlor, has an indoor and outdoor room under the supervision of a nurse, and also in conjunction with the Nursery a First Aid Room is maintained.

The Beauty Parlor also has a view, and inasmuch as no one can look into the windows on the roof, the windows are of clear glass on the street side, giving a friendly and clean atmosphere.

Considerable interest has been shown in the entire building and adjacent areas by a wide variety of people. Further evidence of its unique development and handling is shown by the fact that is is the only department store honored in a recent Three-year architectural competition sponsored by the Southern California Chapter of the American Institute of Architects.

For added charm in Any setting



USE STANLEY BLACK ORNAMENTAL HARDWARE!

Stanley Black Ornamental Hardware was inspired by Colonial and Early American pieces. It is ideal not only for summer camps, lodges and guest houses, but also for single and multiple family dwellings, apartments and private executive offices. Your customers will appreciate the extra beauty of Stanley Black Ornamental Hardware. Recommend it! Send for descriptive folder now. The Stanley Works, New Britain, Conn.

STANLEY

Reg. U.S. Pat. Off.

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

ANNUAL CONVENTION STRUCTURAL ENGINEERS

(From Page 10)

Costs moderated by Richard W. Ware, Director Structural Engineers Association of California. L. L. Wise, Associate Editor of Engineer News Record spoke on Building Costs as interpreted by ENR. Both speakers stressed that building costs have levelled off and are consistent with costs of other basic commodities and that any appreciable decline is not expected.

A section of the program led by Geo. E. Brandow featured papers on design construction of Earthquake Resistant Structures.

Following a talk by T. K. May on Timber Design, L. J. Markwardt, Assistant Director of the U. S. Forest Products Laboratory gave some remarks on recent research program at the Laboratory.

Concluding the technical program a paper featured with many colored pictures and movies was presented by Anton Tedesko of Chicago. This paper was on the subject of Thin-shelled Long-span Concrete Roof Arches.

Presided over by President John A. Blume, a business session was held in which was included a passage of a resolution on Mark Falk's recommendation for establishment of a State Building and Safety Commission.

Subsequent to the Convention, the Board of Directors for the ensuing fiscal year elected Harry A. Bolin as President, Ernest D. Francis as Vice President, Geo. Brandow, Secretary-Treasurer and Barnes, Blume, Falk, W. H. Peterson, Harold King, Jesse Rosenwald, Directors.

On Friday night, in commemoration of the State Centennial and the start of the State's second century and the first year of the State Association under its new constitution, a 49'er theme cocktail party followed by a square dance was sponsored by the Affiliate Members of the Southern Association. All attending, particularly the ladies, were dressed in costume representative of the theme.

On Saturday evening the Convention was climaxed by a cocktail party sponsored by the Associated General Contractors Central California Chapter represented by A. B. Smith, President.

Following this, a banquet participated in by the entire assembly of over 300 was highlighted by a talk by Mark Hanna of Fresno State College. His subject was "Imagination in Your Profession," a very timely and serious subject, presented humorously by the speaker.

The banquet was livened by skits and presentations of prizes for whatever excuses prizes could be given, including the award of the perpetual trophies for golf.

Among the guests at the banquet were Carleton Smith, representing the Superintendent of the U. S. Park Service, Yosemite Valley, Paul Davis, American Institute of Architects of Southern California Chapter and A. B. Smith, President of the Associated General Contractors, Central California Chapter.

.The Convention Arrangement Committee which made the successful and happy Convention was headed by J. W. Herron and Mrs. J. W. Herron in charge of the ladies activities.

ARCHITECT OPENS NEW OFFICES

Hollis Logue, Jr., A.I.A. Architect recently announced the opening of offices in the Burrell Building, 246 South First Street in San Jose, California, for the general practice of architectures.

CALIFORNIA STATE FUNDS ALLOCATED FOR BUILDING

The State of California has allocated some $1,430,793 for the construction of a new Music, Speech and Library building on the campus of the San Francisco State College.

Kump and Falk of San Francisco have been selected as the architects on the project.

JAMES W. MAHONEY NAMED TO NEW EXECUTIVE POST

James W. Mahoney, vice president of the Gladding, McBean & Company has been named general manager of the company's Central Division with headquarters in San Francisco, according to a recent announcement by Fred B. Ortman, president.

JAMES W. MAHONEY

Mahoney will be in charge of the company's activities in northern California, southern Oregon, Nevada, Utah, and the Hawaiian and Philippine Islands.

Prior to assuming his new duties, Mahoney was assistant to the president with offices in Los Angeles. He succeeds C. W. Planje, who has been appointed vice president and assistant to the president, with offices in San Francisco.

The company also announced closing of the Livermore firebrick plant and transferring activities including refractory research to the Pittsburg (California) refractories plant which has been termed one of the most modern plants of its kind in the country.

SO MUCH HOT WATER — 20 30 40

SO FAST — 40 GALLONS PER HOUR

IN SO SMALL A SPACE — 14¼" 16¼" 18¼"

THE *Continental* GLADIATOR

QUEEN SIZE *in beauty—*
KING SIZE *in performance*

Engineering ingenuity has put everything in this sized heater to meet the rigid tests of the American Gas Association.

Slim and beautiful for the modern home, with the new plus features for complete safety and peak performance.

One of a new complete line designed to conserve space.

Check the size YOUR HOUSEHOLD NEEDS
STORAGE TANK CAPACITY GUIDE

Number Bathrooms	Number Bedrooms	Storage Cap. Gallons
1	1 or 2	30
1	3 or 4	40
2	2 or 3	40
2	4 or 5	50
3	3	50
3 or 4	4 or 5	75

Approved by American Gas Association, Inc.

Continental
WATER HEATER COMPANY LTD.
1801 Posadena Avenue Los Angeles 31, California

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Nevada State Board of Architects:
L. A. Ferris, President, Reno; Walter Zick, Secretary, Las Vegas; Directors, Aloysius MacDonald, Las Vegas; Russell Mills and Edward Oarsons, Reno. Office, P. O. Box 2107, Las Vegas, Nevada.

Northern California Chapter:
Wm. Clement Ambrose, President; Lester W. Hurd, Vice-President; Ralph N. Pollack, Secretary; Donald Beach Kirby, Treasurer: Office 369 Pine Street, San Francisco.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainswarth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Winsor Soule, President; Ralph Armitage, Vice-President; Robert Ingle Hoyt, Secretary; Lutah M. Riggs, Treasurer; Office 116 E. Sola St., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
A. C. Martin, Jr., President; John Rex, Vice President; Maynard Lyndon, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Los Angeles 5, California.

Spokane Chapter:
E. J. Peterson, President; Richard Eddy, Secretary, Old National Building, Spokane 8, Washington.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Walda B. Christenson, President; Perry B. Johanson, 1st Vice-President; Charles T. Pearson, 2nd Vice-President; John M. Morse, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

GUEST ARCHITECT

Auguste Perret, prominent French architect, was the guest of the University of Illinois, during an exhibition of his works at the U. of I. Navy Pier recently.

Sponsored by the French government, Perret's exhibit included many outstanding examples of French architecture. He has been commissioned by the French government to supervise the reconstruction of the port and city of Le Havre, destroyed during the last war.

NOW YOUR CHAPTER PUTS EMPHASIS ON LIVING

Pleasant conditions for city living, country living, working in office or factory and shopping centers were depicted in an exhibit at the Architectural League Building and sponsored by the New York Chapter A.I.A., in cooperation with the Board of Education of New York.

Four interesting models were originated to acquaint New York students of high school age with the important features to look for in well planned communities and buildings and to teach them the need of civic planning.

ARCHITECT SPEAKS AT NATIONAL HOME MEET

Dean William W. Wurster of the School of Architecture and Planning of the Massachusetts Institute of Technology, Boston, was the featured speaker at the 16h Annual Meeting of the National Association of Home Builders recently held in Boston.

A record attendance heard a technical program centered around the $6-billion Federal Housing Act of 1949.

SCHOLARSHIP IN LANDSCAPE ARCHITECTURE BY HARVARD

The Department of Landscape Architecture of the Graduate School of Design of Harvard University is offering a scholarship for the academic year, 1950-51, carrying a stipend of $600, according to an announcement by Bremer W. Pond, chairman of the department.

The award is the equivalent of the tuition for one year. Complete information available from the universtity.

AWARDED MEMORIAL SCHOLARSHIP GIVEN BY KANSAS STATE COLLEGE

John H. Von Gunten, a member of the Kansas State college architecture staff, has been awarded the 1949 John Stewardson $1,400 Memorial scholarship in architecture, according to an announcement by Paul Weigen, department head.

The award is a traveling scholarship for study abroad, and was awarded for a problem in design of three churches—Presbyterian, Episcopal, and Catholic.

WASHINGTON STATE CHAPTER

Professor A. L. Miller of the Engineering Department of the University of Washington, and Elmer Gunnette, Northwest District Engineers of the AISC, were the principal speakers at the regular October meeting.

The program was devoted to a discussion, illustrated with slides, of earthquakes and earthquake damage inflicted by the recent earthquakes. Discussions included why damage resulted and theories were advanced for preventative design.

* * *

The bowling League got off to a good start recently with 10 teams participating. Last year's very successful schedule included but six teams.

* * *

Joshua Vogel, in addition to many planning responsibilities, has been appointed a member of the State Board of Health.

* * *

ASSOCIATE MEMBER: Melvin B. Hunt, Seattle, has been named an Associate Member.

Gift Subscription For Christmas 1949

As a service to its readers GIFT SUBSCRIPTIONS to ARCHITECT & ENGINEER magazine are available for this year's Christmas giving.

REGULAR SUBSCRIPTION Rate will apply:

United States and Pan America
$3.00 a year: two years $5.00

Foreign countries $5.00 a year

PLEASE SEND ARCHITECT & ENGINEER AS A GIFT To:

name... occupation..

address... city..... zone..... state..

Sign my gift card: From....

name.... occupation.

address... city..... zone..... state...

Sign my gift card: From.....

name..... occupation.....

address..... city..... zone..... state.....

Sign my gift card: From.....

Your Name.....

address..... city..... zone..... state.....

Enclosed is my check for.....

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Harry W. Bolin, President; E. C. Hillman, Vice-President; Robert Short, Secretary-Treasurer. Directors: S. B. Barnes, Lewis Osborne, John Case, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

ILLUMINATING ENGINEERING SOCIETY OF NORTHERN CALIFORNIA MEETS

Television studio and stage lighting techniques highlighted discussions by two experts in the specialized lighting field at a recent dinner meeting of the Northern California Section, Illuminating Engineering Society in the San Francisco Engineers Club.

The speakers Arch Monson and Waldron Wilson of the C. J. Holzmueller Company, San Francisco and Los Angeles theatrical supply firm, described the most recent and notable stage lighting installations they have designed which were used for the California Centennial Celebrations at Columbia and Monterey, and also the lighting which was used for the recent Charles-Valentino heavyweight championship prize fight at the San Francisco Cow Palace.

The program included an exhibit of equipment used for stage lighting and photographs of recent installations.

Prof. Dan M. Finch of the University of California, chairman of the Society, presided.

Recognized Everywhere!
IT'S HAWS FOR HIGHEST QUALITY
• Best Materials
• Finest Workmanship
• Trouble-free Valves and Fittings
• Complete Sanitation
Write today for '49 HAWS Catalog. Specify HAWS—and be sure!
HAWS SANITARY DRINKING FOUNTAINS ELECTRIC WATER COOLERS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

AMERICAN SOCIETY FOR METALS PUGET SOUND CHAPTER

Wednesday evening, October 19, the Puget Sound Chapter, A.S.M., heard a talk entitled, "Discussions on Heat Treating" by Mr. J. C. Youlten, who is co-owner of the Commercial Steel Treating Company in Seattle.

The definition of heat treatment according to the A.S.M. handbook, "Is a combination of heating and cooling operations, timed and applied to a metal or alloy in the solid state in a way that will produce desired properties." The above states the broad application of heat treating.

It is desirable to hold the shape and surface of the article to be heat treated; therefore, the lowest possible temperature should be employd to obtain the desired results. The designer of a tool or die is in a great measure responsible for the results of heat treatment. The cracking of parts is very often the product of design. Inadequate fillets and light and heavy sections are joined, they tend to crack the article during heat treatment. Complicated tools and dies should not be made from water hardening steels.

Steel coming from the mill is almost always decarburized. One sixteenth of an inch should be taken off each part to insure surface hardness in later treatment. Carburized or decarburized steel will have a tendency to crack during heat treatment because of the difference in the coefficient

of expansion between the carburized and decarburized portion of the steel and the parent metal. The difference in the coefficient of expansion introduces stresses and subsequent failure of the part very often occurs. The two forces tending to break steel parts are the internal forces due to fabrication and the external service stresses. Heat treating can be and does cause high internal stresses due to the careless technique.

Dimension tolerances can be controlled by not over heating which will cause expansion and under heating which causes shrinkage. A cold tool or die should not be placed in a hot furnace because the chance for cracking is then enhanced. Also, too rapid heating can cause cracking of a finished or semi-finished part.

During the war Anola Steel was used as a substitute for 2330. 4130 was the old standby for good results and easy handling. It can be quenched in water after critical dimensions are reached such as ¾" for bar stock etc. Is should be drawn for longe periods for the proper results.

4340 Steel which is to be cut by a torch should be pre-heated to 1540-1550° F. before cutting.

During quenching agitation is important to alleviate gas pockets which are formed during the first and second phase of gas and vapor formation. The article to be quenched should be introduced into the quenching media at an angle to allow gas bubbles to escape and thereby eliminate the danger of soft spots forming on the quenched piece.

The problems of the heat treater are three fold: he is expected to do the work fast, inexpensive, and above all correctly.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

Members John E. Rinne, Arthur W. Anderson and John A. Blume, spoke at the November meeting, giving a "Report of Joint Lateral Forces" representing a committee report of the Structural Engineers Association of Northern California and the San Francisco Section of the American Society of Civil Engineers.

Members of both organizations were present to hear the report.

SACRAMENTO MAN APPOINTED

Ernest D. Francis, Sacramento (California) engineer has been elected vice president of the Structural Engineers Association of California.

Compare the Value

Specify

Clipper

FORCED AIR GAS HEATING

The Henderson Clipper, Clipperette and new Hendy "60" offer a complete range in B.t.u. input, from 60,000 to 200,000. Each model *challenges comparison* in design, materials, construction, performance and price! Investigate before you specify.

PRECISION CONSTRUCTION— Custom standards of craftsmanship combined with modern assembly-line production. Even the panels are fitted to a tolerance of 1/64th inch!

HENDERSON BLOWERS—Our own design, produced complete in our own factory, painstakingly balanced for smooth, quiet operation! No others like them.

FACTORY TESTING—Every unit is completely assembled at the factory and tested in actual operation. Saves time, saves trouble on the job.

Write for "Compare the Value" booklet

HENDERSON

FURNACE AND MFG. CO. • SEBASTOPOL, CALIF.

CLIPPER • CLIPPERETTE • HENDY "60"

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Galitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. MacJennett, Mueller Brass Company, 475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

H. C. GALITZ
Elevator Division
Westinghouse Electric Corporation

H. C. (Herb) Galitz was born in Chicago, Illinois, where he obtained all of his schooling, and started as a young fellow with Kaestner and Hecht Company, later acquired by Westinghouse Elevator Division. He then spent a few years in Jersey City, New Jersey and moved to San Francisco about ten years ago.

His entire business experience has been in the Elevator Industry, having worked in all of its various phases, namely, engineering, application, service, construction and is now currently handling the New Sales activities in the Bay Area. (Editor's note: he is one who can truthfully say he has had his ups and downs.)

Herb is now fulfilling his second session as Secretary of the San Francisco Chapter and has taken an active part in various committees at other times.

He says that four sons keep him well occupied, but you can bet if it weren't for his charming wife, Evelyn, he would not have time for his hobbies of bowling and fishing.

NATIONAL NEWS:

James M. Ashley, Director of Public Relations of Libbey-Owens-Ford Glass Company, was re-elected president of the Council at the annual meeting in Chicago.

Other officers renamed at the meeting were A. Naughton Lane, Monarch Metal Weatherstrip Corp., St. Louis, Mo., first Vice President; Elliott C. Spratt, Hillyard Co., St. Joseph, Mo., second Vice-President, and Charles A. Snyder, Richmond Screw Anchor Co., Brooklyn, N. Y., Secretary.

F. J. Close, Aluminum Company of America, Pittsburgh, Pa., was elected Treasurer.

Newly elected members of the Council's Board of Directors were Robert Beggs, Roddis Plywood Corp., Marshfield, Wis., F. M. Hauserman Co., Cleveland, Ohio; W. V. Peters, Truscon Steel Co., Youngstown, Ohio and W. E. Zipp, Ceco Steel Products Corp., Chicago.

In addition, the following were re-elected to the Board for two year terms: S. W. Antoville, U. S. Plywood Corp., New York; H. W. Collins, The Celotex Corp., Chicago; J. M. Musser, Weyerhauser Sales Co., St. Paul, Minn; J. D. Rowland, Andersen Corp., Bayport, Minn., Frank A. Sansom, Chamberlin Co. of America, Detroit, Michigan; and C. B. Stainback, Westinghouse Electric Corp., Pittsburgh, Pa.

LOCAL NEWS:

Many of our members attended the 22nd Annual Convention of the California Council of Architects at Palm Springs, November 6th to November 9th. Your editor regrets not being able to be present, but we are sure we will have good reports from those who did.

COMING EVENTS:

The Christmas Jinx Committee reports things are going along smoothly. Don't miss seeing our members in chorus girls' costumes, and the skit, which we have been informed, promises to teach us the origin of Modern Architecture.

On Saturady, December 10th at 10:00 AM, we have been invited with our guests to see the new ten million dollar plant of Owens-Corning-Fiberglas in Santa Clara. After about an hour and a half tour of the plant, luncheon will be served in the plant cafeteria.

NEW MEMBERS:

We welcome James (Jim) C. Hollinger as alternate for Mueller Brass Company. Clarence Berry has retired from this Company, and he knows he will be missed at our various functions.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

(From Page 14)

maintained to avoid overall distortion of the column shaft or localized stresses which might deflect the column flanges. It was found that the large amount of welding at the beam connections resulted in an overall shortening of from ⅛" to 3/16" in the length of the columns for which allowance had to be made in laying out the member. To insure accurate fitting in the field, however, all punching and drilling which was accessible after assembly was performed after welding was completed on each member, thereby holding to a minimum any misalignment due to heat distortion or longitudinal shrinkage.

Erection was carried out by conventional methods using two guy derricks to set material. The use of welded construction required strict adherence to the sequences specified by the engineering department to insure proper alignment of the finished structure. Generally welding was carried on simultaneously on both floors of each tier with welders working on opposite sides of each column. Welding started in the center of the floor area and progressed uniformly toward the outside walls. Approximately 40 welders were employed in the field construction.

Throughout this job every effort was made to reduce costs by arranging for all welding to be performed in the downhand position. This permitted the use of large electrodes, greater rates of deposit, and better quality. It was also considered important in the interest of economy to perform as much of the welding as possible in the shop instead of in the field where wage rates are higher and efficiency of welders lower. The gross weight of welding rod used in the shop was 77,000 lbs. and in the field 32,000 lbs. The rate of deposit in the shop was approximately 3 lbs. per hour and in the field slightly over 2 lbs. per hour. For all groove type welds E6020 electrodes were used to obtain a fast burn off rate. Fillet welds were made with E6012 rod to avoid undercutting. Electrode sizes varied from 5/32 to ¼".

It is customary in reports such as this to point to some record in speed of construction or cost accomplishment. Neither can be claimed in this one. Although the construction period was unduly prolonged by mill deliveries on wide flange shapes, speed would have been unwise in the face of new problems and development of new ideas. Furthermore, there is really no proper basis for comparing the cost of fabricating and erecting this structural steel frame. It is obvious that the cost per ton of steel required should be higher for this type of construction; however, overall economies cannot be judged on the basis of a single element, such as the cost of the steel frame,

"YOU SURE PICKED A SMART ARCHITECT"

. . . said the Contractor

Contractor: It's a pleasure to build a home like this, where every detail is well planned in advance. You sure picked a smart architect.

Mr. Home Builder: Yes, we chose a man who knows how to build real convenience, comfort, safety and economy into a home. Guess that's why he specified **CERTIFIED ADEQUATE WIRING.**

Contractor: A first class wiring job is a smart investment. It gives you plenty of outlets and switches together with a sufficient number of circuits of heavy wire to meet your needs now and in the future. And the initial cost is only a small fraction of your building budget.

Mr. Home Builder: That's right . . . no house is REALLY modern without **CERTIFIED ADEQUATE WIRING.**

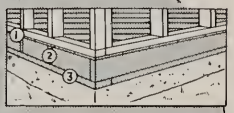
—:—

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 Market Street San Francisco 3

YOU PROTECT THESE WEAK SPOTS
from termites and decay

1. SUB FLOOR
2. FLOOR JOISTS
3. MUDSILL



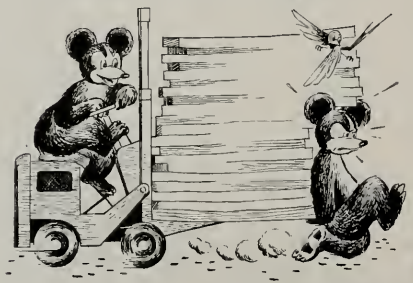
WHEN YOU SPECIFY..

BAXCO
PRESSURE TREATED
FOUNDATION
LUMBER
J. H. BAXTER & CO.

Refer to 1949-1950 AEC Catalogue for Complete specifiction data

J. H. BAXTER & CO.
333 MONTGOMERY ST. • SAN FRANCISCO 4, CALIF. • DOuglas 2-3883

HONEST GRADING...
no substitutes



E. K. WOOD LUMBER CO.

GENERAL OFFICES: P. O. Box 1618, Oakland, California
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE 3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE 4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon
RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO • THERMAL
LA VERNE • WHITTIER • PASADENA • SAN PEDRO

in a construction program. The evaluation of the benefits obtained from the type of structure which was specified is not within the scope of the activities of a strucural steel contractor. If any records were set, they are probably more in the nature of the interest and enthusiasm which was shown by everyone throughout the job. In a field of work where each day is just more of the cut, punch and rivet routine, a job such as the Times Building stimulates much interest and imagination. This accounts for the ingenuity which was displayed in solving the many unusual problems and the pleasure which is derived from seeing such a project satisfactorily completed.

PORTLAND CEMENT ASSOCIATION HOLD TECHNICAL CONFERENCE

More than 100 executives and technical men, all members of the General Technical Committee of the Portland Cement Association, attended a regional meeting of the Committee in Los Angeles.

Cement plant operators and operating officials from twelve states and Canada, representing more than thirty-four companies engaged in the manufacture of portland cement were present.

Included among speakers were Dr. A. Allan Bates, Chicago; Prof. R. E. Davis, University of California; Oliver G. Bowen, Los Angeles; L. H. Tuthill, Denver; Fred W. Panhorst, Sacramento; and Bailey Tremper, Olympia, Washington.

AMERICAN RIVER DEVELOPMENT WILL START IMMEDIATELY

Preconstruction work on the recently authorized features of the American River development project in California as a part of the Central Valley Water Project, will start at once, according to the Bureau of Reclamation.

It is the first addition to the CVP since the initial works were authorized fourteen years ago, and will enlarge the Folsom Dam from a 355,000 acre-foot flood control reservoir to a 1,000,000 acre-foot multiple-purpose reservoir. Estimated cost of the work has been set at $50,000,000 with an additional $45,000,000 for a hydroelectric plant and $6,500,000 for contributing works.

ESTABLISHES ARCHITECTURAL OFFICES IN GREAT FALLS

Alfred Francis Bordeleau, A.I.A. Architect, has announced the opening of offices at 410 Eighth Street North, Great Falls, Montana, for the general practice of architecture.

Bordeleau was formerly on the Design Staff of the School of Architecture and Planning of the University of Denver, Denver, Colorado.

IN THE NEWS

ELECTED PRESIDENT PLUMBING BUREAU

George O. Toepfer, president of The Moog Company of Milwaukee, Wisconsin, was elected president of the Plumbing and Heating Industries Bureau at the 13th annual meeting of the organization held the early part of October in Chicago.

Other officers elected included: Jack Cooper, president, Harry Cooper Supply Co., Springfield, Mo., vice-president; Earl O. Brown, The Chicago Faucet Co., treasurer; and Norman J. Radder, Chicago, secretary.

LOS ANGELES BUNKER HILL

Los Angeles' major effort at slum clearance is making steady progress, according to a report by the Los Angeles City Housing Authority.

Six buildings have been cleared of occupants and three buildings demolished on Bunker Hill, which is just West of the City Hall. The balance of some fifty-six buildings involved have been repaired for temporary use until residents have been relocated.

Some families are moving voluntarily, others are seeking new locations in public housing.

CEMENT ASSOCIATION OPENS NEW OFFICES

The Portland Cement Association opened a new district office in Salt Lake City the first of last month with Edgar B. Wilson, formerly structural field engineer with the Association's Oklahoma City office, as district engineer in charge.

This is the 26th district office to be established by the Association in principal cities in this country to carry on educational work, technical service and local promotion activities.

DECENTRALIZATION OF FEDERAL PURCHASES

Plans for decentralization of all Federal government purchases for non-military use and a broad program of buying from local manufacturers, producers and agriculturalists has been announced by Jess Larson, Administrator of General Services for the Federal government.

New offices are being set-up in California to handle details of local purchases.

STEAMSHIP LINES AGAINST PANAMA CANAL TOLL COSTS

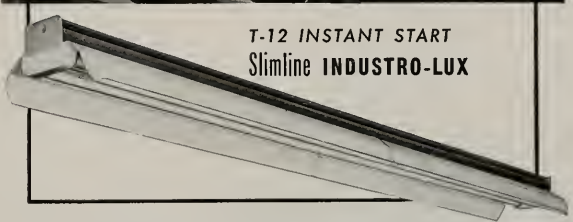
The Pacific American Steamship Association, with general offices in San Francisco, have launched a campaign designed to effect a reduction in Panama Canal toll charges.

Claims are made that many items in the building industry are priced higher than necessary because of unnecessarily high toll charges at the Panama Canal.

Any relief will have to come from Congressional action, it is reported.

PHILIP J. CARRAGHER has been appointed industrial paint sales manager of Pabco in the greater Los Angeles area.

THOMAS B. BRYANT has been appointed paint sales manager of Pabco for the Contra Costa Territory, California.



T-12 INSTANT START
Slimline **INDUSTRO-LUX**

This new instant start Slimline INDUSTRO-LITE is just one of many Smoot-Holman developments in the field of lighting — 430 ma. with more lumens per foot.

Offices in Principal Western Cities • Branch and Warehouse in San Francisco

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CEDARWALLS
RED CEDAR
SIDE WALL SHINGLES
"Wonder Cote" Finished
in Nine Attractive Colors
Detailed Specifications Furnished on Request
SIDEWALL LUMBER CO.
1994 Oakdale Ave. San Francisco 24 ATwater 2-8112

CLINTON CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HEADLINE NEWS & VIEWS

By E. H. W.

"IT is startling to see how far we have been led down the road to economic disaster. A concerted effort must be made to reduce the cost of governmental functions": — Adolph Teichert, Jr., President Associated General Contractors of America.

* * *

ACCORDING to some authorities, some of America's future plumbers will soon be studying engineering through scholarships at various state universitties. The State University of Iowa already has such a program.

* * *

"HEAVY drains upon California's Unemployment Reserve Fund, which begun a year ago, threaten depletion of present reserves and increases of employment insurance payroll taxes on employers of from $26-million to $33-million in 1950:"—James Mussatti, Gen. Mgr. Calif. State Chamber of Commerce.

* * *

"EVERY manufacturer is responsible for the output of two factories—one of physical products, the other is spiritual:" Wallace F. Bennett, President, National Ass'n of Mfgr's.

* * *

AFTER a sluggish 1949 start, the home building industry has finally hit its stride. By the first of October, monthly new starts and totals for the year, were considerably ahead of last year.

* * *

GASOLINE tax assessments in California during October rose above $13,000,000 to an all time high, representing some 298,179,933 gallons of gasoline.

* * *

MORE than a million persons visited the 78 new homes on public display throughout Chicago and suburbs during the 3rd annual Chicagoland Home and Home Furnishings Festival.

* * *

A Senatorial housing junket to Europe forced action on the housing legislation in Congress—let's hope some of those who insist on imposing European theory on us will remain . . . in Europe.

* * *

THE 6th Annual Convention and Exposition of the National Association of Home Builders will be held in Chicago, February 19-23, 1950, according to E. M. Spiegel, convention committee chairman.

* * *

IF all the plants that make iron and steel in the United States were assembled in one piece of land it would amount to approximately 74 square miles.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

MATERIALS OF CONSTRUCTION, Wood, Plastics, Fabrics. By Albert G. H. Dietz, Sc. D. D. Van Nostrand Co., Inc. 250 Fourth Avenue, New York City. Price $4.50

Containing numerous diagrams, drawings, charts and photographs the author has covered the subject of building materials, their properties and uses during every stage in the development of a product. Of keen interest to engineers, builders, architects, and designers.

The rapidly growing field of composite materials is treated in the final chapter.

The author is Associate Professor at the Massachusetts Institute of Technology.

THE CHURCH BUILDER. By Elbert M. Conover, D.B., Sc.D. Parthenon Press, New York. Price $2.75.

A complete guide for the church building or improvement program; has more than 100 illustrations and lists many commendable American Church Buildings. Its 27 chapters cover the author's experience gained from more than twenty-five years in church building guidance in every state of the United States—in more than 30 denominations.

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

126. PINECREST DOORS

Detailed dimensions and natural color illustrations make this new catalog of Pinecrest Ponderosa doors informative. This booklet was prepared by the Western Pine Supply Company, distributors of Pinecrest doors, and includes all the designs of outside, inside and screen doors. A.I.A. 19-E-1, 12 pages illus. 7/49.

127. CARE AND CLEANING OF MARBLE

The first booklet in many years which gives information relative to the car and cleaning of marble. This material was compiled and published by the Marble Institute of America as part of its general service. The booklet shows many methods, from uses of detergents and poultice pastes, to hydrogen peroxide bleaches. A.I.A. 22-A, 16 pages illus. 7/49.

128. RADIANTILE

A brochure has just been released by the Clay Products Association covering the new system of RadianTile Panel Heating. This system is described as one of the biggest heating advances in over a decade—fundamentally a new approach. Completely illustrated with specifications and details throughout. 30 pages—illus. 8/49.

129. SKYSCRAPER CONSTRUCTION FOR EVERY BUILDING

Publication of a new booklet describing Junior Beams, titled "Skyscraper Construction for Every Building", is announced by Jones & Laughlin Steel Corporation. Junior Beams are the lightest hot-rolled steel beams manufactured. They are an exclusive J & L product. The Booklet gives complete technical data for the installation of Junior Beams and for Junior Channels. 24 pages—illus. 10/49.

ARCHITECT AND ENGINEER,
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

126 127 128 129

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after (December 15th.—A. & E.)

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer

REPUBLIC STEEL

See Sweet's Catalog File or write us for full information.

REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO

DENVER, COLORADO . . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco GArfield 1-7755
2215 El Camino Real, San Mateo S. M. 5-0687
304 Bryant Street, Palo Alto P. A. 3373
2610 The Alameda, Santa Clara S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles THornwall 4196
MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT

Pumping Machinery for Every Purpose

For Service Call DOuglas 2-6794 or MUtual 8322

SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO Phone SUtter 1-6747
3522 COUNCIL STREET (Beverly Blvd. at Virgil Ave.)
LOS ANGELES 4, CALIF. Telephone Fairfax 7834
GOOD FOR ALL TIME VERMONT MARBLE

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.
SAN FRANCISCO, CALIF. HEMLOCK 4100

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

VALUABLE NEWS SERVICE

- **BUILDING MATERIAL DEALERS**
- **CONTRACTORS**
- **ENGINEERS**
- **FINANCIAL INSTITUTIONS**

ARCHITECTS REPORTS gives advance news on construction projects in Northern California, lists: name of projects, location, architect, proposed cost and other pertinent information.

HANDY individual slip-reports, issued daily at a total cost of only
$10 a month

ARCHITECT'S REPORTS
Published Daily
The ARCHITECT and ENGINEER, Inc.
68 Post Street, San Francisco - DO 8311

SMALL CRAFT HARBOR SURVEY AUTHORIZED

Authorized from the Secretary of the Army for a detailed survey of 15 recommended sites for small craft harbors along the coast of northern California has been announced by Col. F. S. Tandy, District Engineer in San Francisco.

Limited funds are available for the newly authorized survey, work of which has already been started.

RECEIVE ANNUAL MOLE AWARDS

Former President Herbert Hoover and Richard E. Dougherty, retired vice president of the New York Central System in charge of improvements and developments have recently been awarded the annual Moles awards for outstanding contribution to construction and for their exemplary careers as citizens.

The Moles is an association of leaders in America's heavy construction industry, and is limited to 375 men.

APPOINTED DIRECTOR OF DEVELOPMENT

Miles D. Catton, Manager of the Portland Cement Association's Soil-Cement Bureau since 1941 has been appointed Director of Development of the Association, according to a recent announcement by Dr. A. Allan Bates, the Association's vice president for Research and Development.

Work of the Development Department under Catton's supervision will be directed towards development of new products and processes and to new and improved use of Portland cement and concrete, in two major classifications—Structural Development and Transportation Development.

Prior to joining the Association staff, Catton was a junior highway engineer in the Bureau of Tests, Illinois Division of Highways.

ELECTED PRESIDENT OF THE MARBLE INSTITUTE OF AMERICA

At the annual meeting of the Marble Institute of America held in Colorado Springs recently, the following officers and directors were elected to serve for the ensuing year: R. E. Mayes, President (Carthage Marble Corp'n, Carthage, Mo.); A. A. Landi, vice-president (Importer & Wholesaler, Long Island City, N. Y.); F. L. McGratty, secretary (McGratty Sons, Brooklyn, N. Y.); and treasurer G. W. Oehmcke, (Milwaukee Marble Co., Milwaukee, Wis.).

Directors included J. W. Fisher, Southwest Onyx and Marble Company, San Diego, California; C. A. King, New Orleans, La.; F. J. Plimpton, Vermont Marble Company, New York; and G. W. Oehmcke, Milwaukee Marble Company, Milwaukee.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$50.00 to $90.00 per M, truckload lots, delivered.

Fire Brick—Per M—$90.00 to $125.00.

Cartage—Approx. $9.00 per M.

Paving—$75.00.

BUILDING PAPER & FELTS

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Siseltkraft, reinforced, 500 ft. roll	7.00
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.20
30-lb. roll	2.93
Compcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, 3/4-lb., 50-ft. roll	$3.13
Deadening felt, 1-lb.	3.69
Asphalt roofing, 15 lbs.	2.20
Asphalt roofing, 30 lbs.	2.93
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$1.75
Medium	2.04
Heavy	2.40
Extra Heavy	2.77

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.
Sash weights, cast iron $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	$4.75
Nails, per keg, base	$10.55
8-in spikes	10.55
Rim Knob lock sets	1.80
Butts, dull bress plated on steel, 3½x3½	.73

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.38 per bbl. f.o.b. car; delivered $3.60.

Per Sack, small quantity (paper) $1.00

Carload lots, in bulk per bbl. 2.78

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White — 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

1-2-4 mix, to 10 yards*	$11.75
10 to 100 yards*	10.75
Over 100 yards*	10.25

* Delivered to site.

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$.16	$.16
6x8x16-inches, each	.21	.21
8x8x16-inches, each	.25	.25
12x8x16-inches, each	.33	
12x8x24-inches, each		.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$6.50
⅜-inch to ⅛-inch, per cu. yd.	6.50
⅛-inch to 0-inch, per cu. yd.	7.00

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including antrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considarably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnasite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. 3/16"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Waar Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill gredes nat available.

Victory Oak—T & G

33/32 x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

33/32 x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

33/32" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Leyers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inleid Floor Co.)

GLASS—

Single Strength Window Glass	$ .25 per □ ft.
Double Strength Window Glass	.35 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
¼ in. Polished Wire Plate Glass	1.00 per □ ft.
¼ in. Rgh. Wire Glass	.58 per □ ft.
Obscure Glass	.45 per □ ft.
Glazing of above is additional.	
Glass Blocks	$2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) avarage $64 per registar.

Forced air avarage $91 per registar.

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") ..... $65.00 per M sq. ft.
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... $69.00 per M sq. ft.
Ceiling Tileboard ..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

No. 1 Common ..... $85.00 per M
No. 2 Common ..... 83.00 per M
Select O. P. Common ..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry. 6 to 24 ft.	185.00
"B" grade, medium dry	150.00
Plywood	.18c to 20c per ft.
Plyscord	.11½c per ft.
Plywall	.9c per ft.
Plyform	.15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes,— 8.00 per square

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.44, Copper Bearing, per carloads, per 100 sq. yds. $35.50
Standard Ribbed, ditto 37.70

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c
Turpentine ..... $1.85 per gal. in 5-gal. cont.
Raw Linseed Oil ..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil ..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil ..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hat roll channels metal lath (lathed only)	3.00
Seilings with ¾ hat roll channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.

Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Cedar in place, 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Graval $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $24.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $29.00
1 x 25" Resawn Cedar Shakes, 10" Exposure 22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton $99.50
Vitrified, per foot:
Standard, 8-in. ..... $ .62
Standard, 12-in. 1.09
Standard, 24-in. 4.72
Clay Drain Pipe, per 1,000 L.F. in carload lots:
Standard, 6-in. $211.00
Standard, 8-in. 352.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12', $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvanized iron, 65c sq. ft. (flat).
Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill.
$270 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd.	$7.15
⅜-in. Rd.	6.40
½-in. Rd.	6.20
⅝-in. Rd.	6.05
¾-in. & ⅞-in. Rd.	6.00
1-in. & up	5.95

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—$1.75 per sq. ft.
Cove Base—$1.35 per lin. ft.
Glazed Tile Wainscot—$2.00 per sq. ft.
Asphalt Tile Floor ⅛" x ⅜"—$ .40 per sq. ft
Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—
Glazed Terra Cotte Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.25 sq. ft.
4 x 6 x 12	1.50 sq. ft.
2 x 8 x 16	1.45 sq. ft.
4 x 8 x 16	1.75 sq. ft.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x3-inches, per M	$124.00
12x12x4-inches, per M	139.50
12x12x8-inches, per M	176.00

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

WESTERN ASBESTOS APPOINTED INSUL-MASTIC REPRESENTATIVE

Western Asbestos Company, San Francisco, has been appointed an authorized Insul-Mastic licensee, which brings to Northern California another direct representative prepared to make applications of Insul-Mastic high quality coatings.

Chas. B. Purcell, company President, in commenting on the appointment explained some of the unusual characteristics of Insul-Mastic materials that account for their outstanding records. They are heavy mastic materials which are spray applied at atmospheric temperatures. The base is of Gilsonite, which is one of the purest natural asphalt known. Gilsonite, since its discovery over a half century ago, has proven by scientific tests as well as by the supreme test of time and service, to be a most effective water corrosion proofing material, and one of the most resistant of all materials used in the coating industry. It is highly resistant to most acids and alkalies, as well as sun and weather.

Purcell pointed out that Gilsonite differs materially from petroleum asphalts obtained by distillation of crude petroleum. The latter contain waxy paraffins, which have relatively little protective value against the elements and against physical wear and tear, and which contain 70 to 80 per cent of petrolene that is lost or disintegrates within a comparatively few years. Gilsonite contains virtually no paraffin. It is made up of a high percentage of indestructible and stablized hydrocarbons, not susceptible to displacement by other elements and virtually immune to lose by evaporation.

One of the major fillers used in Insul-Mastic materials is Mica, which has a vast superiority of coatings over asphaltic coatings containing any other fillers. This is borne out by the National Bureau of Standards tests (Ref. R. P. 1073, "Weathering Tests on Filled Coating Asphalts" by O. G. Strieter, February, 1938).

Purcell further pointed out that Gilsonite Insul-Mastic was chosen, to the exclusion of all other materials, by the various military agencies of the United States Government, at the conclusion of World War II.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to Sept. 1, 1949.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	Santa Clara	Solano	Stockton	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	3.00*	3.00	3.00	2.50	3.00	3.00	3.00	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.175	2.175	2.175	2.175	2.175	2.175	2.12	2.12	2.12	2.12	2.12
CEMENT FINISHERS	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
ELECTRICIANS	2.50	2.50	2.50	2.25	2.50	2.50	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.32	2.32	2.32	2.32	2.32
STRUCTURAL STEEL	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.20	2.20	2.20	2.20	2.20
STRUCTURAL	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
CONCRETE	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
LATHERS	2.8125	2.8125	2.8125	2.8125	2.00*	2.50*	2.8125	2.8125	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
PLASTERERS	2.8125	2.50*	2.50*	2.25*	2.25*	2.50*	2.50*	2.8125	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.50	2.25*	2.25*	1.775*	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.25	2.25	2.25	1.875	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.25	2.25	2.25	2.125	2.30	2.40	2.125	2.125	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	3.00	2.8125	2.8125	2.25*	2.8125	2.8125	2.8125	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.675	2.675	2.675	2.15	2.00	2.675	2.675	2.4375	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:
CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

WANTED: Engineer, preferably graduate mechanical with 10 years in gypsum industry with executive experiences. In answering state salaries received and expected, as well as experiences. Box 100, Architect and Engineer, 68 Post St., San Francisco, Calif.

GET THE BEST, don't be satisfied with anything but the best. Window sash, Doors, Cabinets, etc. Town Talk Sash & Door Mill, 524 9th St., Sacramento.

WANTED! A market, for the complete output of a sizeable redwood shingle mill; Write Box W, Architect & Engineer, 68 Post Street, San Francisco.

ADVERTISERS wishing to sell building materials and products, GET THE BEST RESULTS from regular advertising schedules in ARCHITECT & ENGINEER magazine. Write for complete information, including rates, circulation, etc., 68 Post Street, San Francisco.

FLOOR COVERINGS for industrial, commercial, and residential construction. Complete lines, one of the oldest, best established organizations in the Sacramento Valley. LATTIN'S, INC., 1519 Alhambra Blvd., Sacramento.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

ADMINISTRATION BUILDING REMODEL—SAN FRANCISCO: Golden Gate Bridge & Highway District — owner — Golden Gate Bridge Toll Plaza, $28,974. ENGINEER: J. C. Little & Co.—San Francisco—interior & exterior remodel. GENERAL CONTRACTOR: J. H. Pomeroy & Co.—San Francisco.

FAIRVIEW GRAMMAR SCHOOL ADDITION — HAYWARD, ALAMEDA COUNTY: Hayward Elementary School District—owner —2 classrooms, $29,994. ARCHITECT: Anderson & Simonds—Oakland—frame & stucco construction. GENERAL CONTRACTOR: N. T. Lewis—Hayward.

COUNTY OFFICE BUILDING — CHICO, BUTTE COUNTY: County of Butte—owner—$47,085. ARCHITECT: Thomas Pain Dunlap — Chico — reinforced concrete construction. GENERAL CONTRACTOR: Norlie Construction Co.—Chico.

STORE BUILDING — MENLO PARK, SAN MATEO COUNTY: Chas. D. Culbertson—owner—$38,000. ARCHITECT: George L. Hanna—Oakland—1 story, 50 x 120, reinforced concrete, pre-cast tilt-up construction. GENERAL CONTRACTOR: E. S. McKittrick Co.—Oakland.

MAUSOLEUM ADDITION & COLUMBARIUM—COLMA, SAN MATEO COUNTY: Woodland Memorial Park—owner—$400,000. ARCHITECT: Wm. G. Merchant—San Francisco—1 story, reinforced concrete construction, marble & bronze exterior, art glass windows. GENERAL CONTRACTOR: Ira H. Larson Co.—San Francisco.

KENSINGTON HILL TOP SCHOOL — RICHMOND, CONTRA COSTA COUNTY: Richmond Board of Education—owner—12 classrooms, 3 kindergartens, offices, cafetorium & toilet rooms, $348,211. ARCHITECT: Dragon, Schmidts & Hardman—Berkeley—frame & stucco & brick veneer construction. GENERAL CONTRACTOR: Elmer J. Freethy—El Cerrito.

MIRA VISTA GRAMMAR SCHOOL—RICHMOND, CONTRA COSTA COUNTY: Richmond Board of Education—owner—14 classrooms, 2 kindergartens, assembly room, Community room, offices & toilet rooms, $441,458. ARCHITECT: Miller & Warnecke —Oakland—structural steel frame & concrete block walls. GENERAL CONTRACTOR: Indenco—Oakland.

STORAGE WAREHOUSE—SALINAS, MONTEREY COUNTY: Monterey County Trust & Savings Bank — Owner — $9,000. ARCHITECT: Chas. E. Butner—Salinas—1 story, 20 x 80, concrete block & frame construction. GENERAL CONTRACTOR: F. V. Hampshire —Salinas.

OFFICE BUILDING ADDITION & REMODEL —SALINAS, MONTEREY COUNTY: Salinas Title Guarantee Co. — owner — $20,000. ARCHITECT: Chas. E. Butner—Salinas—1 story, reinforced concrete & frame construction. GENERAL CONTRACTOR: F. V. Hampshire—Salinas.

RESIDENCE — BERKELEY, ALAMEDA COUNTY: Wm. Corlett — owner — $14,000. ARCHITECT: Wm. Corlett—Oakland—frame & stucco construction. GENERAL CONTRACTOR: A. C. Hirshfield—Berkeley.

MEDICAL BUILDING — VISALIA, TULARE COUNTY: Mr. Kertels — owner — $27,528. ARCHITECT: David Horn & Marshall Mortland—Fresno—frame & stucco construction. GENERAL CONTRACTOR: Ralph E. Suess —Visalia.

SUNDAY SCHOOL BUILDING—OAKLAND, ALAMEDA COUNTY: Melrose Baptist Church—owner—$99,874. ARCHITECT: Cecil S. Moyer — Oakland — frame & stucco construction. GENERAL CONTRACTOR: Anderson-Haglund—Oakland.

NEW ATHERTON GRAMMAR SCHOOL—ATHERTON, SAN MATEO COUNTY: Redwood City Elementary School District—owner—10 classrooms, offices, music & speech & toilet rooms, $146,244. ARCHITECT: Arthur D. Janssen—Atherton—frame & stucco construction. GENERAL CONTRACTOR: J. C. Peterson Co.—San Carlos.

CHURCH—OAKLAND, ALAMEDA COUNTY: Lakeside Unity Church, owner, $35,800. ARCHITECT: Ralph Wastell, Oakland, frame and stucco construction, some structural steel. GENERAL CONTRACTOR: Henry Glynn, Oakland.

APARTMENT BUILDING — MENLO PARK, SAN MATEO COUNTY: H. R. CARSKADON—owner—8 apartments, $77,508. ARCHITECT: Ralph Wastell, Oakland—2 story, frame and stucco veneer. GENERAL CONTRACTOR: Harris & Fieldheim, Menlo Park.

BELLA VISTA GRAMMAR SCHOOL—OAKLAND, ALAMEDA COUNTY: Oakland Board of Education—owner—18 classrooms, kindergarten, offices, auditorium, cafeteria, library and toilet rooms, $538,213. ARCHITECT: Reynolds & Chamberlain—Oakland —2½ stories, 50,000 sq. ft., reinforced concrete. GENERAL CONTRACTOR: Carl N. Swenson Co.

STATE OFFICE BUILDING—CARSON CITY, NEVADA: State of Nevada—owner—$546,953. ARCHITECT: Perry Means, Reno—2 story and basement; 59,000 sq. ft.; reinforced concrete, brick veneer, freight elevator. GENERAL CONTRACTOR: Walker Boudwin Construction Co., $398,704, Reno. PLUMBING, HEATING & VENTILATING CONTRACTOR: Humes Bros., $91,159—Reno. ELECTRICAL CONTRACTOR: American Electric Co., $57,090—Caldwell, Idaho.

RECTORY BUILDING—SAN JOSE, SANTA CLARA COUNTY: Roman Catholic Archbishop of S. F. — owner — Church of S Wounds, $53,000. ARCHITECT: Vincent Buckley—San Francisco—2 story and basement, frame and stucco construction. GENERAL CONTRACTOR: V. J. Sunzeri & Son —San Jose.

GRAMMAR SCHOOL BUILDING — SHARP PARK, SAN MATEO COUNTY: San Pedro Elementary School District—owner—7 classrooms, kindergarten and toilet rooms, $103,959. ARCHITECT: Arthur D. Janssen & W. R. Daseking—Atherton—frame and stucco construction. GENERAL CONTRACTOR: Grambergu & Guisto—Half Moon Bay.

AUDITORIUM BUILDING—CLOVIS, FRESNO COUNTY: Clovis Union High School District — owner — $250,000. ARCHITECT: Frank Wynkoop & Assocs.—Fresno—Reinforced concrete and structural steel frame. SUPT. OF CONSTRUCTION: Irvin George Gordon & Son—Newport Beach.

APARTMENT BUILDING — BURLINGAME, SAN MATEO COUNTY: Mr. Sills—owner—20 apartments, $141,671. ARCHITECT: Wallace A. Stephen—Burlingame—3 story, garage storage, concrete block, structural steel & concrete floor deck, balance frame & stucco, hot water heating. GENERAL CONTRACTOR: Harris & Feldheim—Menlo Park.

OFFICE BUILDING REMODEL—SAN FRANCISCO: California Packing Corporation—owner—Butler Brothers Building, $800,000. ARCHITECT: Albert F. Roller—San Francisco—6 story and 2 story tower; interior remodel to part of the building for offices. GENERAL CONTRACTOR: Swinerton & Walberg—San Francisco.

NEW BAYVIEW GRAMMAR SCHOOL—SANTA CRUZ, SANTA CRUZ COUNTY: Santa Cruz Board of Education—owner—13 classrooms, 2 kindergartens, office, multipurpose & toilet rooms, $284,600. ARCHITECT: Robert Stanton—Carmel— frame & stucco construction. GENERAL CONTRACTOR: Orlo C. Hackbarth—Santa Cruz.

ALBERT FIELD — SAN RAFAEL, MARIN COUNTY: City of San Rafael—owner—$231,247. ARCHITECT: Joseph Esherick—San Francisco—administration building & maintenance building, concrete block construction, structural steel, grandstand, baseball field, tennis courts, floodlighting, lawns & sprinkler system, steel fencing. GENERAL CONTRACTOR: Robt. McCarthy Co.—San Francisco.

APARTMENT BUILDING — MENLO PARK, SAN MATEO COUNTY: H. R. Carskadon—owner — 8 apartments, $78,290. ARCHITECT: Ralph Wastell—Oakland—2 story, frame & stucco & stone veneer. GENERAL CONTRACTOR: Harris & Fieldheim—Menlo Park.

GROCERY STORE BUILDING — MODESTO, STANISLAUS COUNTY: Marvin L. Heckendorf—owner—$22,084. ARCHITECT: John W. Bomberger—Modesto—1 story, 50 x 90 sq. ft.—reinforced concrete and concrete block, wood roof trusses, plate glass front. GENERAL CONTRACTOR: A. C. Carroll—Modesto.

TERMINAL WAREHOUSE BUILDING—SAN FRANCISCO: Corporation—owner—$8,000,000. ARCHITECT: Walter M. Cory—New York: STRUCTURAL ENGINEER: R. H. Cooley—Oakland—6 story, 400 x 600, reinforced concrete, flat slab coonstruction, metal sash, refrigeration equipment & cold-storage rooms, 3 20-ton truck elevators, 8 8-ton freight elevators & 4 passenger elevators. GENERAL CONTRACTOR: John J. Moore Co.—Oakland.

NATATORIUM BUILDING—ALBANY, ALAMEDA COUNTY: Albany Board of Education — owner — swimming pool, locker rooms, etc., $171,890. ARCHITECT: Dragon, Schmidts & Hardman—Berkeley—concrete block & structural steel construction, concrete swimming pool. GENERAL CONTRACTOR: John M. Bartlett—El Cerrito.

STORE BUILDING — ANTIOCH, CONTRA COSTA COUNTY: John Lo Grasso—owner —$17,563. ARCHITECT: Philip D. Tomasello—San Francisco—1 story, 50 x 63, concrete block, structural steel, flagstone & plate glass front. GENERAL CONTRAC-

PANACALITE

The Standard for Perlite Aggregates
An Engineered Product — Engineering Service
Air Classified — Sized & Graded for Plaster, Concrete & Stucco Aggregates

Chemical, Insulation & Filter Aid Grades
A. S. T. M. Fire rating—2 hours
N. B. F. U. Accepted

a product of
Combined Metals Reduction Co.

Manufactured by
American Perlite Corporation
26th & B Sts.—Yard 2—Richmond
Richmond 4307

TOR: Wendt Construction Co.—Berkeley.

NEW CHURCH—FRESNO, FRESNO COUNTY: First Presbyterian Church—owner—952 seating capacity, $169,850. ARCHITECT: H. Rafael Lake & Elso D. DiLuck—Fresno—reinforced concrete & brick construction. GENERAL CONTRACTOR: L. H. Hansen & Sons—Fresno.

PAROCHIAL SCHOOL—CONVENT—PALO ALTO, SANTA CLARA COUNTY: Roman Catholic Archbishop of S. F.—owner—8 classrooms, St. Thos. Aquinas Parish, $243,947. ARCHITECT: Vincent G. Raney—San Francisco—masonry, frame & stucco construction. GENERAL CONTRACTOR: Wells P. Goodenough—Palo Alto.

MEDICAL BUILDING — STOCKTON, SAN JOAQUIN COUNTY: Owner withheld—4 suites of offices, $67,557. ARCHITECT: J. Upton Clowdsley—Stockton—frame & brick veneer, asphalt tile floors, steel sash. GENERAL CONTRACTOR: T E. Williamson—Stockton.

ISOLATION WARD BUILDING—MARTINEZ, CONTRA COSTA COUNTY: County of Contra Costa—owner—50 beds, $69,000. ARCHITECT: E. Geoffrey Bangs—San Francisco—1 story, 45 x 127, frame construction. GENERAL CONTRACTOR: L. V. Cantrell—Berkeley

COUNTY HOSPITAL BUILDING — WILLOWS, GLENN COUNTY: County of Glenn —owner—90 beds, $627,974. ARCHITECT: O. A. Deichmann—San Francisco—1 story, reinforced concrete & frame & stucco construction, composition roofing, tile & terrazza floors, steel sash. GENERAL CONTRACTOR: B & R Construction So.—San Francisco.

MASONIC BUILDING—COLUMBIA, TUOLUMNE COUNTY: Masonic Lodge—owner—$39,666. ARCHITECT: Kirby & Mulvin—San Francisco—2 story, reinforced concrete, brick veneer & frame construction. GENERAL CONTRACTOR: Geo. W. Bates—Oakland.

OFFICE BUILDING—OAKLAND, ALAMEDA COUNTY: Blue Cross — owner — $350,000. ARCHITECT: Fred L. Confer & R. G. Willis—Oakland. STRUCTURAL ENGINEERS: Hamilton & Williges—Oakland—3 story & basement, 75 x 150, structural steel frame, reinforced concrete construction, marble & plate glass front, 1 elevator.

RESIDENCE — ORINDA, CONTRA COSTA COUNTY—Mr. Foster—owner—15 rooms & 6 baths, $150,000. ARCHITECT: Albert Henry Hill—San Francisco—1 story, frame construction, redwood & stone exterior, concrete floors, radiant heating, cork-tile floors. GENERAL CONTRACTOR: Henry Arian Construction—San Francisco.

GRAMMAR SCHOOL—EDGEWOOD, SISKIYOU COUNTY: Butteville Elementary School District—owner—2 classrooms & assembly room, stage & toilet rooms, $69,999. ARCHITECT: Chas F. Dean—Sacramento—reinforced concrete & frame construction. GENERAL CONTRACTOR: A. J. McMurry Co.—Yreka.

HEALTH CENTER BUILDING—RIPON, SAN JOAQUIN COUNTY: San Joaquin Local Health District—owner—$14,278. ARCHITECT: John U. Clowdsley — Stockton — 1 story, concrete block & frame construction, concrete floor. GENERAL CONTRACTOR: C. A. Moorman—Stockton.

SUNDAY SCHOOL & ASSEMBLY HALL—NOVATO, MARIN COUNTY: Novato Presbyterian Church—owner—$30,000. ARCHITECT: Lloyd A. Rusmussen — Novato — 2 story, frame & stucco construction. GENERAL CONTRACTOR: E. R. MacDonald—Novato.

SUNDAY SCHOOL & RECREATION BUILDING—PATTERSON, STANISLAUS COUNTY: Federated Church — owner — $40,000. ARCHITECT: John B. Anthony — Oakland — concrete block & frame construction. GENERAL CONTRACTOR: Waltrid Knutson—Patterson.

4 RECREATION CENTERS—SAN FRANCISCO: City & County of S. F.—owner—field houses & gymnasium & locker rooms; Potrero Hill Playground; Ocean View Playground; St. Mary's Playground; Sunset Playground, $842,000. ARCHITECT: Wm. G. Merchant—San Francisco—field house—2 story, auditorium, club rooms, etc.; frame & stucco construction. GENERAL CONTRACTOR: Carrico & Gautier San Francisco.

HIGH SCHOOL ADDITION — REDWOOD CITY, SAN MATEO COUNTY: Sequoia High School District—owner—commercial wing —10 classrooms, $104,585. ARCHITECT: Blanchard & Maher—San Francisco—frame & stucco construction. GENERAL CONTRACTOR: Julian N. Basin—Menlo Park.

STORE BUILDING—PALO ALTO, SANTA CLARA COUNTY: George Wagner—owner —$35,990. ARCHITECT: Donnell E Jaekle —San Jose—1 story, 50 x 130, reinforced concrete & structural steel frame, plate glass front. GENERAL CONTRACTOR: E. A. Hathaway & Co.—San Jose.

CHABOT GRAMMAR SCHOOL ADDITION —CASTRO VALLEY, ALAMEDA COUNTY: Castro Valley Elementary School District—owner—5 classrooms, kindergarten, $75,925. ARCHITECT: Dragon, Schmidts & Hardman—Berkeley—frame & stucco construction. GENERAL CONTRACTOR: Hugh A. Garner—Hayward.

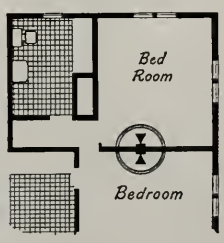
NAILOCK
ACOUSTI LOCK BOARD
ACOUSTI-CELOTEX
...the Latest and
Best System of
Installing Suspended
Ceilings for
Acoustical Treatment

WESTERN ASBESTOS COMPANY

Distributors · Engineers · Contractors

San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Sacramento: 1224 Eye Street, 2-8993
Stockton: 1120 E. Weber Ave., 4-1863
Fresno: 1837 Merced Street, 3-3277
San Jose: 201 So. Market St., BA 4359-J

Where to plan double telephone outlets in new homes



Adjoining rooms where your customers will spend most of their time — such as bedrooms or the living room and kitchen —are convenient spots for double outlets. The diagram above illustrates how two outlet boxes may be fastened together ... an excellent arrangement for either portable or fixed telephones.

Complete layout includes outlet boxes, concealed wiring and a protector cabinet. New telephones can be added and old telephones moved later on should the need arise. And the cost is small. *For free help in planning, call your local Pacific Telephone Office and ask for "Architects and Builders Service."*

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

IN THE NEWS

APPOINTED REPRESENTATIVE

E. W. Harris has been appointed factory representative in southern California for the Westwood Manufacturing Company, according to an announcement by George Halvorsen, General Sales Manager of the firm.

Harris was formerly associated with the California Hardware Company, Los Angeles, and the Beverly Hardware Company of Beverly Hills, California.

INDUSTRIAL DESIGN FIRM EXPANDS

Leo Roselyn, store designer and merchandising consultant with headquarters in San Francisco's Apparel City, has announced the reorganization and expansion of his offices with creation of an architectural division headed by Robert B. Liles, Architect, and a new design division in charge of Maxfield Gluckman.

To be kown as the Leo Roselyn Company, the firm will move into new offices at 2280 Palou Avenue, San Francisco.

CERAMICS ENGINEERING STUDY

A program of study and research in ceramics has been initiated in the department of engineering on the Los Angeles campus of the University of California.

A complete ceramics laboratory with scale model of mixers, extruders, kilns, furnaces and an X-ray machine to examine structure has been installed.

Dr. William J. Knapp is in charge of the program.

ESTABLISHES NEW RECORD

The current high rate of construction activity throughout the nation has permitted the Detroit Steel Products Company to establish a new all time high record of shipments of steel doors, doors and building panels, and Strand garage doors for the month of September, according to a recent report by E. C. Hodges, vice-president of the Company in charge of sales.

NEW MANAGING DIRECTOR

O. Harry Schrader, Jr., has been named managing director of the Douglas Fir Plywood Association, and will assume his new duties on December 15.

Schrader is well known for his experience in merchandising and sales-promotion of building materials with retail dealers as regional executive of the Western Retail Lumber Dealer's Association.

He succeeds Chas. E. Devlin who resigned recently to become general sales manager of the Simpson Logging Company.

FAIR BUILDING

Plans for a $1,400,000 agricultural fair building to be built on Anaheim-Telegraph Road near Maywood, adjacent to the new Santa Ana Freeway, have been announced.

The new building will be used by the 48th District Agricultural Association for the Great Western Livestock show and will be available for other community events.

The architectural firm of Wurdeman and Becket have been selected as the architects for the project.

KAISER ACQUIRES GYPSUM PLANT

Henry J. Kaiser of Kaiser Industries, Inc., Oakland, California, recently announced the acquisition of the Redwood City, California, gypsum products plant formerly operated by the Pacific Portland Cement Company.

The plant, together with one at Long Beach, will be operated in the future by the Kaiser Gypsum, Division of Kaiser Industries, Inc.

BIG PROJECT STARTED

Architect Walter M. Cory of New York City, N. Y., has announced the start of a six story warehouse building to be erected at 6th and Channel streets in San Francisco.

Cost of the building will be approximately $8,000,000.

LOS ALAMOS TUNNEL

The United States Atomic Energy Commission is seeking bids on the construction of a 4500 ft. tunnel through the mountains near the town of Los Alamos in New Mexico.

Complete information available from Black & Veatch, Consulting Engineers, Los Alamos, New Mexico.

HOSPITAL CONSTRUCTION COURSE

A special 30-week course on hospital construction and alterations has been announced by Columbia University's School of Public Health.

Sponsored by the Greater New York Hospital Association, the Hospital Council of Greater New York, and the United Hospital Fund, the course will be under the direction of Dr. John Gortell, associate professor of Hospital Administration, Columbia University.

U. C. L. A. MEDICAL CENTER

The Regents of the University of California have approved preliminary plans for a new $15,500,000 Medical Center on the Los Angeles campus of the University of California.

Plans call for inauguration of freshmen classes in the new building in 1952.

ARCHITECT MOVES

Robert N. Eddy, Architect, A.I.A., has announced the relocation of his offices in the Kern County Land Company Building, 1700 - 19th street, Bakersfield, California.

GRAMMAR SCHOOL BUILDING, Hillsborough, San Mateo County: Hillsborough Elementary School District, owner; Classrooms, kindergarten, offices, cafeteria & toilet rooms, $257,557. ARCHITECT: Kump & Falk, San Francisco. Structural steel frame & frame & stucco construction. GENERAL CONTRACTOR: Jos. Bettancourt, San Bruno.

MEAT PLANT ADDITION & REMODEL, San Jose, Santa Clara County: San Jose Meat Co., owner, $65,000. ARCHITECT: Ned H. Abrams, Sunnyvale. Concrete blocks & structural steel construction. GENERAL CONTRACTOR: Earl W. Heple, San Jose.

JAMES H. MURRAY has been appointed industrial paint sales manager for Pabco in Seattle, Washington.

J. H. HERTLING has been appointed paint sales manager of Pabco for the southern Idaho-eastern Oregon Territory with headquarters in Boise.

L. J. PERRINE has been appointed paint sales manager of Pabco for the San Fernando territory in southern California.

HARLEY D. REESER has been appointed assistant to Pabco's southern district paint sales supervisor with offices in Southgate, California.

STOLTE INC.

General Contractors

—:—

OAKLAND • CALIFORNIA

STATIONERY
SCHOOL & OFFICE
SUPPLIES

•

Printing Engraving
Announcements

•

CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

THE RAINS ARE HERE . . . PROTECT WITH CONCRETE SHEATHING AND COVERING MATERIAL

TOUGH as SHOE - LEATHER - and WATERPROOF, Too!

Specify

SISALKRAFT REINFORCED BUILDING PAPER
FOR CURING AND PROTECTING

GUNN CARLE & CO
20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

THE TORMEY COMPANY

GENERAL PAINTERS AND DECORATORS

Phone UNderhill 1-1913

563 FULTON STREET
San Francisco

MULLEN MFG. COMPANY

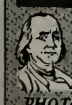
BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO - SACRAMENTO
OAKLAND - LOS ANGELES - DENVER

Fine
ENGRAVINGS

POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO, 11

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946.

Of the Architect and Engineer, published monthly at San Francisco, Calif., for October 1, 1949.

State of California } SS.
City and County of San Francisco }

Before me, a notary public in and for the state and county aforesaid, personally appeared L. B. Penhorwood, who, having been duly sworn according to law, deposes and says that she is the Business Manager of The Architect and Engineer, and that the following is to the best of her knowledge and belief, a true statement of the ownership, management (if daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946, (section 537, Postal Laws and Regulations), printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, The Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

Editor: Edwin H. Wilder, 68 Post St., San Francisco, Calif.

Managing Editor—None.

Business Manager, L. B. Penhorwood, 68 Post St., San Francisco, Calif.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

The Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

K. P. Kieruff, 68 Post St., San Francisco, Calif.

E. N. Kieruff, 68 Post St., San Francisco, Calif.

L. B. Penhorwood, 68 Post St., San Francisco, Calif.

F. W. Jones, 1153 McKinley Ave., Oakland, Calif.

V. S. Yallop, 68 Post St., San Francisco, Calif.

E. J. Cardinal, 942 Howard St., San Francisco, Calif.

Sewall Smith, Lafayette, Calif.

3. That the known bondholders, mortgagees, and other security holders owning or holding one per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)
None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation, for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is: (This information is required from daily publications only.)

L. B. Penhorwood, Business Mgr.

Sworn to and subscribed before me this 12th day of October, 1949.

(Seal) ERNEST O. MEYER

Notary Public in and for the City and County of San Francisco, Calif.

(My commission expires Oct. 4, 1952)

Phone GArfield 1-1164

Thomas B. Hunter
DESIGNER OF HEATING

AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS

★

41 SUTTER STREET
ROOM 710
San Francisco California

Scott Company

HEATING • PLUMBING
REFRIGERATION

★

San Francisco
Oakland
San Jose
Los Angeles

DINWIDDIE CONSTRUCTION COMPANY

•

BUILDERS

•

CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA

HERRICK IRON WORKS
STRUCTURAL STEEL
REINFORCING STEEL

18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Lumber — Gypsum Wallboard
Interior Trim — Gutters
Special Moldings
The place to SAVE
is
LUMBER MANUFACTURING CO.
225 Industrial Ave. JUniper 7-1760
SAN FRANCISCO

Subscribe Now —
ARCHITECT and ENGINEER
$3.00 Per Year

PITTSBURGH TESTING LABORATORY
ENGINEERS AND CHEMISTS
Testing and Inspection of Concrete, Steel and Other Structural Materials
Design of Concrete Mixes
Offices in all principal cities
651 Howard St., San Francisco 5
EXbrook 2-1747

Mattock Construction Company
Builders
★
604 MISSION STREET
SAN FRANCISCO

Index to Advertisers

AMERICAN Perlite Corpn. 44
ANGIER Pacific Corp. *
ARCHITECTS Reports 40

BAXTER & Company, P. H. 36
BURKE, W. J. & Co. *

CLARK, N. & Sons *
CLASSIFIED Advertising 43
CENTER Stationery 46
CLINTON Construction Company 38
CONTINENTAL Water Heater Co. 29

DETROIT Steel Products Co. 8
DINWIDDIE Construction Co. 47
DUFFY Tile Co. 48

FULLER, W. P. Co. *
FORDERER Cornice Works 40

GLADDING, McBean & Co. Inside Front Cover
GUNN, Carle & Company 46

HANKS, Inc, Abbott A. 48
HAWS Drinking Faucet Company 32
HENDERSON Furnace & Mfg. Co. 33
HERRICK Iron Works 47
HOGAN Lumber Company 38
HUNT Robert W., Company 48
HUNTER, Thos. B. 47

JOHNSON, S. T. Co. *
JUDSON, Pacific-Murphy Corp. 40

KOPPERS Co. Inc. 5
KRAFTILE Company 30

LUMBER Manufacturing Co. 48

MARBLE Institute of America 2
MATTOCK, A. F. Co. 48
MICHEL & Pfeffer Iron Works 6 & 7
MILLER Company, The *
MULLEN Mfg. Co. 47

NORTHERN California Electric Bureau 35

PACIFIC Clay Products Co. *
PACIFIC Coast Gas Association 1
PACIFIC Manufacturing Company 39
PACIFIC Portland Cement Company Back Cover
PACIFIC Telephone & Telegraph Co. 45
PITTSBURGH Testing Laboratory 48
POOR Richard Engraving Co. 47

REMILLARD-Dandini Co. 48
REPUBLIC Steel Corporation 39

SCOTT Co. 47
SECURITY Valve Company *
SIDEWALL Lumber Co. 38
SIMONDS Machinery Company 39
SISALKRAFT Company 38
SMOOT-Holman Co. 37
SOULE Steel Company *
STANLEY Works, The 28
STOLTE, Inc. 46
SWINERTON & Walberg Co. 47

TAYLOR Co., Halsey W. *
TORMEY Company, The 47

U. S. Bonds Inside Back Cover

VERMONT Marble Company 39

WESTERN Asbestos Co. 45
WOOD, E. K. Lumber Company 36

*Indicates Alternate Months

REMILLARD-DANDINI Co.
Brick and Masonry Products
★
400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

TILE CONTRACTORS
Shower Doors, Tub Enclosures
Medicine Cabinets
INSTALLATIONS OF EVERY DESCRIPTION
Modernizing - Repairing
253 Minna St., S. F. YUkon 6-1489
DUFFY TILE CO.

ABBOT A. HANKS, INC.
Engineers & Chemists
INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •
—
TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS
—
624 Sacramento Street, San Francisco

Robert W. Hunt Company
ENGINEERS
Inspection - Tests - Consultation
Schools and Other Structures Are Built as Designed
When Construction Materials are Inspected at point of Manufacture and during Erection by
ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities
San Francisco, 251 Kearny Street
Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories
Chicago - New York - Pittsburgh

ARCHITECT AND ENGINEER

HILLSBOROUGH, CALIFORNIA, RESIDENCE

PUBLIC LIBRARY
DEC 20 1949
ART

ANGUS McSWEENEY A.I.A. Architect

DECEMBER 1949

Part of Seattle, Architect; Lease & Leighland, Contractor

It's Ceramic Veneer

for better-looking, permanent interiors

This machine-perfected terra cotta is the wall finish used in the main public rooms of the new Seattle-Tacoma Airport Administration Building, Bow Lake, Wash.

Neither time nor traffic will dim the beauty of these waiting room walls. They're faced with Ceramic Veneer, the same permanent finish used on the exteriors of the majority of larger buildings in all principal Pacific Coast cities.

For a sparkling clean interior finish, Ceramic Veneer offers large-scale surfaces, modern color and detail, and low installation costs. Maintenance is negligible because no refinishing is ever necessary.

If you would like to know all the ways versatile Ceramic Veneer can serve you and your clients, you are invited to call or visit the nearest Gladding, McBean & Co. office.

75 YEAR

CERAMIC VENEER IS A GLADDING, McBEAN & CO. PRODUCT

Other quality ceramic products include Hermosa Tru-Joint Tile, Glazed Block, Face Brick, Roof Tile, Floor and Patio Tile, Refractories, Flue Lining, Vitrified Clay Pipe, Franciscan Earthenware and Franciscan China. *Offices at* Los Angeles • San Francisco • Portland • Seattle • Spokane

• ARCHITECT AND ENGINEER

Vol. 179 No. 3

ARCHITECTS' REPORTS—Published Daily

E. H. WILDER
Editor

MARK DANIELS, A.I.A.
Associate Editor

J. WELLS HASTINGS, A.I.A.
Contributing Editor

PROF. LELAND VAUGHAN
Landscape Architecture

JOHN A. BLUME
Structural Engineering

MICHAEL GOODMAN
Planning

JOHN S. BOLLES, A.I.A.
Book Reviews

★

COVER PICTURE:

One of the newer homes of California style to be built on the San Mateo Peninsula, near San Francisco, is the spacious residence of Mr. & Mrs. Roy F. Mattock in Hillsborough, California.

Particularly adapted to out-door living, the home was designed by Angus McSweeney, A. I. A. Architect of San Francisco. (See page 10 for details.)

ARCHITECT & ENGINEER is indexed regularly by ENGINEERING INDEX, INC.

Contents for

DECEMBER

EDITORIAL NOTES 4

NEWS AND COMMENT ON ART 6

THE ART OF APPLYING THE SCIENCE OF SOIL MECHANICS . . . 7
By TRENT R. DAMES, Engineer

HILLSBOROUGH, CALIF., RESIDENCE OF MR. AND MRS. ROY MATTOCK 10
ANGUS McSWEENEY, A. I. A. Architect

CALIFORNIA COUNCIL OF ARCHITECTS, Annual Convention at Palm Springs 14

NEW STYLES IN CHURCH ARCHITECTURE SET BY WESTERN ARCHITECTS 16
By ARTHUR W. PRIAULX

A.I.A. ACTIVITIES 28

WITH THE ENGINEERS 30

PRODUCER'S COUNCIL PAGE 32
J. WILSON PEELE, Editor

HEADLINE NEWS AND VIEWS 34

IN THE NEWS 35, 44

BOOK REVIEWS, Pamphlets and Catalogues 37

ESTIMATORS GUIDE, Building and Construction Materials 39

BUILDING TRADES WAGE SCALES, Northern, Central and Southern California 41

CLASSIFIED ADVERTISING 41

CONSTRUCTION CONTRACTS AWARDED, General Data 42

ADVERTISERS INDEX 46

INDEX TO ARTICLES AND ILLUSTRATIONS, Vol. 176 to 179, 1949 . . 47

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4: Telephone EXbrook 2-7182. President, K. P. Kierulff: Vice-President and Manager, L. B. Penhorwood: Treasurer, E. N. Kierulff.

Los Angeles Office: Wentworth F. Green, 6605 Hollywood Blvd., Los Angeles 28. Telephone HEmpstead 3171.

Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year: $5.00 two years: foreign countries $5.00 a year: single copy 50c. ARCHITECTS' REPORTS are published daily from this office. Vernon S. Yallop, Manager. Telephone DOuglas 2-8311.

Master-pieces

We all paint our canvas of life
In different or various ways,
Some show the sunrise at morn,
Some, the sunset's rays.

Some show the sorrow of waiting,
The joy when the ship comes in.
Others the blackness of hatred,
And the deep infliction of sin.

Though some of our masterpieces
Do differ from some of the rest
God will accept them gladly
If the painter has done his best.

—Author Unknown

Season's Greetings

PROMPT DELIVERIES!

From warehouse stocks, Koppers can make prompt shipment of its roofing materials. Get in touch with either of these Koppers Sales Offices:

SAN FRANCISCO:
390 Ninth St.
San Francisesca 3, Calif.
Market 1-6005

LOS ANGELES:
727 E. Gage Ave.
Los Angeles 1, Calif. ..
Adams 3-6231

KOPPERS COMPANY, INC., one of the great names in roofing, has recently expanded its distribution facilities. As a result, Koppers Roofing Materials are now available as far west as San Francisco and Los Angeles.

These materials, Koppers Superior Coal Tar Pitch and Approved Tarred Felt, make an unbeatable roofing combination—a combination that has established remarkable records for long-life roofing. Case histories prove that 20 years' or more cost-free service is common for Koppers Pitch and Felt Roofs.

In every way, Koppers Built-Up Roofs are *good* roofs. So remember: you can now specify Koppers Roofing Materials from coast to coast. Inquiries are invited from architects, engineers and roofing contractors.

KOPPERS COMPANY, INC., Pittsburgh 19, Pa.

KOPPERS

• SPECIFY KOPPERS FOR LONG-LIFE ROOFING •

NEWS AND COMMENT ON ART

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building at the Civic Center, will present the following exhibits and activities during the month of December:

EXHIBITIONS: Sixty-three contemporary American prints selected from the Third National Print Annual of the Brooklyn Museum are included in a traveling exhibtion which is being circulated by the American Federation of Arts and will be shown during December. Jurors for the original exhibition included Adelyn Breeskin, Director of the Baltimore Museum of Art; W. S. Russell Allen, Dr. Meyer Shapiro, Columbia University; and Une E. Johnson, Curator of Prints and Drawings at the Brooklyn Museum.

Other exhibitions include "Portraits and People"; Second Annual Exhibition of Advertising Art; Twenty-fourth Annual Exhibition of the San Francisco Women Artists; First Annual Pacific Coast Decorative Arts Competition for Wallpaper, Textile, Chair and Lamp Design; Permanent and Loan Collections of the San Francisco Museum of Art; and the Albert M. Bender Collections.

The Fifteenth Anniversary Exhibitions will open at the Museum on January 11th.

SAN FRANCISCO ART ASSOCIATION

The New York Times recently published an article on Photography Courses at the California School of Fine Arts, entitled "Techniques in Training" in which the New York newspaper describes the fundamentals upon which the courses are taught and commends those in charge of the instruction for offering a practical approach to the subject of photography.

* * *

Walter Landor & Associates were awarded 1st and 2nd prizes for labels submitted to the National Competition of the Small Brewers' Association, recently held in Chicago.

* * *

Juliette Steele, Theodore C. Polos, Ray Bertrand, and Karl Kasten were awarded prizes at the recent Walnut Creek (California) Festival and Art Show.

* * *

More than 2,728 works were submitted by California Artists in the Los Angeles County Museum's Centennial of Art Exhibition, which was judged by a jury comprising Lester Longman of Iowa State University, Perry T. Rathbone of St. Louis' City Art Museum, and Andrew C. Ritchie, Director of Painting and Sculpture at the Museum of Modern Art.

* * *

An exhibition of the works of aritst members of the San Francisco Art Association will be held at the M. H. de Young Museum in Golden Gate Park, San Francisco, during January.

CALIFORNIA STATE FAIR ART AWARD SHOWN

"Grunion Hunt," first prize winner in the modern section of the 1948 California State Fair Art Show, has been loaned to the Pasadena Art Institute for its one-man show of Richard Haines' work.

Another oil, "Baptism" by Haines, which won second place in this year's State Fair modern section, will also form a part of the Pasadena Show.

PORTLAND ART MUSEUM

The meaning and importance of certain contemporary directions in art are being exhibited during December in the Art Collection representing Sculpture and Paintings of a number of artists. It is a private anonymous Portland collection.

The exhibition contains ten pieces of Sculpture and 29 paintings.

The Artist Membership is initiating an annual exhibition of prints by the Artists of Oregon to be shown this year during December. Exhibit is open to Oregon printmakers.

CALIFORNIA PALACE OF THE LEGION OF HONOR

Thomas Carr Howe, Jr., director of the California Palace of the Legion of Honor in Lincoln Park, San Francisco, has announced the following schedule of exhibitions and special events for the month of December:

EXHIBITIONS: Another Worls: Photographs of Children by Muriel Green; Kuanyama-Ambo: Photographic Documentary of the Loeb African Expedition; Paintings by William Keith from the Blanding Collection; 19th & 20th Century Landscapes from the Permanent Collection of the Museum; Heritage of the Modern City: Prints from the Achenbach Collection; American Rooms in Miniature by Mrs. James Ward Thorne; French Silver and other Examples of the European Decorative Arts from the Catherine D. Wentworth Collection.

EDUCATIONAL ACTIVITIES: Painting Class for children ages 4 through 15, 10:00 a.m. Instruction by Mr. Colin Graham and Mrs. Lilly Weil Jaffe, to December 17th. Classes resume January 14; Adult Painting Class, 2:00 p.m. Instruction by Mr.

(See page 27)

The Art of Applying The Science of Soil Mechanics To The Investigation of Foundation Soils

By TRENT R. DAMES *

The science of soil mechanics, according to the viewpoint of many, had its beginning with the early researches of Terzaghi during the 1920's; on the other hand, the art of applying empirical knowledge of the behavior of soils to the solution of foundation problems is as old as the construction of permanent structures. The Swiss Lake Dwellers constructed pile foundations 15,000 years ago. Vitruvius, the great Roman architect and engineer, who lived in the first century before Christ, discussed the then state of the art of foundation engineering in his "Seven Books of Architecture." Those ancient and medieval structures which remain with us today are largely those whose designers had an understanding of foundation behavior sufficient to the requirements of the sites on which they built.

In the speaker's opinion, the science of soil mechanics had its beginning much earlier than is generally believed. Charles Augustin Columb, who worked in France during the latter part of the eighteenth century, not only was an engineer possessed of rare powers of observation, but was also a brilliant practical mathematician who concerned himself with the behavior of soils in order that he might better predicate the design of structures entrusted to his care. Progress was very slow at first, probably because the practicing engineer knew little and cared less for the work of such brilliant mathematicians as Boussenesq who, in the latter part of the nineteenth century, developed mathematical theory which foundation engineers have only begun to apply in the last quarter century. Nevertheless, progress there was during the nineteenth century: The early issues of the Proceedings of the Institute of Civil Engineers contain penetrating discussions of the effect of the driving of piling for the support of certain Thames River bridges on the remoulding of the clay in which the piling were driven. The designer of the Chicago Opera House was aware that, for the same real unit load, large footings settle more than small footings. In this structure, it was necessary to employ alternately large and small footings. Permanently installed jacks were placed between the small footings and the columns they support, and have since been regularly employed to keep the unpermissible distortions out of the superstructure.

More rapid progress in the new science had, however, to await the advent of the engineering laboratory. Soils vary over such wide ranges of magnitude in their several physical, chemical, electrical, and thermal properties, as to defy ready cataloging in engineering handbooks. Tenfold variations in a single property are commonplace and hundredfold variations not infrequently occur. The engineering laboratory has made possible the measuring of various factors entering into the equations of the mathematicians. This in turn has permitted the making of computations, the answers obtained from which could be subjected to proof or disproof by the observed behavior of full-sized structures.

Where do we stand today as to the science of soil mechanics and, more particularly, with respect to the art of applying the new science? Progress is being made at a rate so rapid that no one would be so rash as to offer an unqualified answer to that question. If you will be charitable with me in this regard, I will seek to briefly suggest something of the present state of the art. The subsequent speakers will more thoroughly cover phases of this same large subject.

The application of soil mechanics is limited by two fundamental factors: The first of these is the

EDITORS NOTE: *This paper was presented by Mr. Trent R. Dames of Dames & Moore, Civil Engineers, Foundation Engineering, Applied Soil Mechanics, of San Francisco and Los Angeles, before the Annual Convention of The Structural Engineers Association of California at Yosemite Valley on October 13, 1949.*

existence of mathematical theory, sufficiently simple in form to permit of engineering solutions and requiring a knowledge of no essential soil properties other than those which we are today capable of measuring. This brings us face to face with the other basic limitation—our ability to explore, test, and measure.

Fundamentally, soil is more nearly like the other materials of construction than most engineers realize. The principles of applied mechanics still apply. For stability, sX, sY, sZ, and sM must be equal to zero. While soil is neither elastic nor isotropic, and is seldom homogeneous, the equations of elastic and plastic theory seem to be applicable within reason. True, tensile strength is usually either nonexistent or small, but this factor accounts for fewer differences in behavior—under the loading conditions to which soil is usually subjected—than the uninitiated would expect.

However, certain approximations that are common to many of the other materials of construction, are no longer valid or justifiable. For example, in most structural theory, the modulus of elasticity is taken as a constant over the range of working stresses. Actually, the modulus of elasticity of metals in compression is an exponential function of the load as evidenced by the recent work of P. W. Bridgman at Harvard University with metals under pressures as high as 1,500,000 pounds per square inch. Over the normal range of design stresses, the straight-line approximation is generally adequate for most structural materials. Not so with soil. Over a normal working range, the modulus of elasticity of a single soil sample may vary as much as five-fold.

In the structures with which most Members of this Association are concerned, little or no attention need be given to the distribution and effect within any element, of the body forces of that element. In the problems of soil mechanics, the body forces are always important and frequently are significant to the exclusion of all external applied forces as, for example, in the case of land slides. Accordingly, while the same mechanics and elastic theory apply to soils as apply to other structural materials, the character of the problems to be solved and the methods of analysis are somewhat different.

In most problems in Soil Mechanics, the general theory is usually in existence. The difficulties arise because it is usually expressed in general terms in some higher form of mathematical shorthand with which most engineers are unfamiliar. The forms of the equations are usually such that when attempts are made to reduce them to forms permitting concrete calculations for specific engineering problems, they become inordinately complex. At this point, the soils engineer is usally reduced to exercising his judgment as to which factors he must retain and those which he may neglect as having only a second order influence on his problem. Good judgment, common sense, and a high degree of engineering intuition are required. Frequently, as for example in the case of settlement calculations, the solution of the problem requires separating the body of earth into a series of small prisms, each of which can be considered separately and finally summed up to make the whole.

Plastic theory, where it exists, can often be applied directly, and occasionally is more simple in form than would be expected. The pressures which may be imposed by spread foundations without yielding of the supporting soils, are equal to π times the shearing strength. Unfortunately, the shearing strength of a soil is directly related to the confining pressure and, as foundations themselves create confining pressure, in some instances the application of the simple theory becomes complex.

In the last analysis, our ability to make practical use of any theory depends upon our ability to measure the pertinent soil properties. Properties which are capable of reasonably accurate measurement and determination, and which have at the same time sufficient utility to justify the efforts made to measure them, include: Moisture Content —Density—Shearing Strength—Frictional Value on Structural Materials—Compressibility (Modulus of Elasticity)—Expansion and Expansive Force—Permeability. Properties which it would be very desirable to be able to measure, but for which no reliable testing methods have yet been developed, include thermal and electrical conductivity and modulus of rigidity. To the best of the speaker's knowledge, no one has yet succeeded in measuring Poisson's Ratio.

In attempting to measure soil properties, the soils engineer has in many cases been guilty of devising many testing procedures which attempt to empirically predict or catalogue the behavior of soils by means of measurements of superficial characteristics. In the speaker's opinion the Atterburg tests for so-called plastic and liquid limit are in this category. Untold effort has been expended in performing countless tests for particle-size graduation when the resulting curves—whose validity in the clay-range is subject to considerable doubt—seldom have any relation to the behavior of the soil when loaded by or employed in engineering structures. In the speaker's opinion the soils engineer has trouble enough attempting valid determination of the essential measurable physical properties of moisture content, density, shearing strength, frictional value, compressibility, expansive properties, and permeability, to waste any time or effort on the unessential and unappliable.

Take as simple a property as moisture content. The soil is placed in an oven and the soil moisture

evaporated. The difficulty arises in employing an evaporative process which consistently removes all of the free moisture but leaves all of the hygroscopic moisture, moisture of hydration, organic content, etc. In dense clays, the evaporative process results in enormous tensile forces being developed in the capillary moisture which prevent the complete removal of water. Accordingly, the determined moisture content is at best an engineering approximation. Fortunately, if the work is thoughtfully and carefully done, with full appreciation of its limitations, the results are sufficiently valid—and, more particularly repeatable—for engineering purposes.

The determination of density is another apparently simple measurement which gives trouble. On the face of things, it should be simple to extract a known volume of soil and determine its weight, thus arriving directly at its density. The trouble arises in determining the volume occupied by a given weight of soil. When a sampling device is forced into the soil, the soil being sampled is compressed. After the sample is removed, and is no longer under the confinement which existed in the ground, it tends to expand. What relation does the volume measured in the laboratory bear to the volume occupied by the same soil in the ground?

And so we continue to more complex determinations such as the determination of shearing strength. Those investigators of a theoretical leaning, tend to favor the so-called triaxial shear test in which a cylinder of soil is tested in much the same manner as a test cylinder of concrete, except that the soil must be confined within a fluid which applies a lateral pressure to the walls of the sample. The test has inherent experimental difficulties which, in the opinion of the speaker, render it of limited value for practical use. The transfer of undisturbed samples from the devices in which they are obtained to the triaxial apparatus is not practical for weak or friable soils. The taking of loose samples and recompacting the soil in the triaxial cylinder involves the probability of serious and misleading error because, even though a density comparable to the undisturbed state be obtained, shearing strength and other physical properties are related to the effect of geological history on the structure of the soil mass. Comparable shearing strength does not follow from comparable moisture, density, and particle-size gradation.

The triaxial test must be performed slowly to permit the escape of air and water from the sample. It is therefore expensive, which encourages a tendency to test too few samples. The curves obtained include large compressive, as well as shearing deformations, and accordingly tend to be continuous curves from the initial application of load to the complete failure of the sample. For this reason, they are at best difficult and uncertain to interpret, at worst, impossible to interpret.

These deficiencies have caused many eastern investigators to favor what is called an unconfined compression test. An unconfined cylinder of soil is tested in a fashion very similar to a concrete cylinder. This test is simple, quick, and inexpensive, but requires the tacit assumption that the effect of confinement on strength is so small a factor that it can be ignored; or stated differently, that the angle of internal friction is zero or nearly zero. Fortunately, for these investigators, New England and the North Atlantic States have extensive deposits of glacial clays wherein the considerable strength thereof is largely attributable to apparent cohesion and only slightly to internal friction. The reverse is true in Western United States and, accordingly, the unconfined compression test has little or no application in this area.

Western soil conditions favor the use of the direct shear test. In this test, a cylinder or prism of soil is sheared in a manner similar to a rivet. It has certain theoretical deficiencies, the principal one being that no one can say what the distribution of stress over the cross-section of the sample is during the course of the test. However, the results obtained with the direct shear test can be checked in the field. Certain types of landslides provide accurate field determinations of shearing strength. When samples of the materials which failed in the slide are subjected to direct shear tests, the shearing strengths so determined usually check within five percent—plenty close enough for engineering purposes. However, this type of test has, what is in our opinion, an overriding advantage: Equipment can be devised which is capable of testing the individual samples quickly and at relatively low cost. Accordingly, it is possible to test a large number of samples for a given project. When one considers how variable even a similarly appearing soil deposit of consistent particle-size gradation can be, both as to variations with area and with depth, a considerable number of tests is absolutely essential to sound and economical foundation design.

Direct shear tests can be performed with either shearing deflection or shearing load as the independent variable (and the other as the independent variable). The independent variable can be applied either continuously or intermittently. The rate of application or the magnitude of the increment can be controlled. Each type and variation thereof has its particular application. The time-rate of loading is important in the direct shear test as in the other types of shear test. The test procedures

(See Page 33)

HILLSBOROUGH, CALIFORNIA

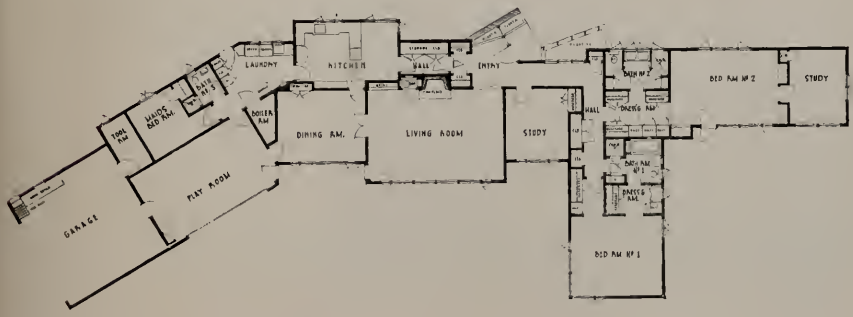
San Mateo Peninsula

Home of Mr. and Mrs. Roy F. Mattock

ANGUS McSWEENEY, A. I. A., Architect

This is a one story California Ranch Type House with a slightly modern feeling. The house was planned so that a patio was created giving privacy and protection from prevailing winds and oriented so that the living room has the proper exposure; also taking advantage of some beautiful specimen of trees that are on the property.

There are some very interesting features about this residence, such as the outdoor social room that is on the garden terrace level and can be entirely opened into the patio with a large



Concrete Foundation

Frame Construction

Stucco Exterior

Incandescent Fixtures

sliding glass door; thus extending the living and social activities into the garden.

The kitchen has many special features, such as deck type range and cabinet type oven and is entirely done in birch natural finish.

A large room was planned for the owner's three children that has a specially designed bath arrangement as well as individual dressing tables, wardrobes, and bed arrangement for each child, with a study room adjoining.

A double purpose den and guest room solves one of the owner's requirements without adding an additional room.

Colored Cement Porches, Steps and Terraces

Stone Chimney and Fireplace

Landscaping by

Eckbo, Royston & Williams
Landscape Architects

Redwaad Siding
Exteriar Finish

Shake Raof

Waad Daars
Frame Windaws

Radiant Heating

The awner's bedraam suite pravides a hall dressing raam arrangement for the Master and a full dressing raam for the Mrs., as well as a luxuraus bath that functions as a guest pawder raam.

The living and dining raams are entirely dane in flush aak, natural finish, and variaus features such as cancealed lighting, secret bar, dish cabinets, etc., are carefully warked aut by the Architect.

California Council of Architects Annual Convention

Palm Springs

With an attendance of delegates and members exceeding by a wide margin any previous convention held, the 22nd annual conference of the California Council of Architects, developed in fact the pre-convention theme of "Architects Take Action".

Specific action taken and approved by architects during the four days of business sessions included adoption of a Resolution endorsing a plan to develop ways and means of employing a full-time executive manager to coordinate activities of the architectural profession on a state-wide level in cooperation with local Chapters and the Council; action that, any recommendation for architects to serve on any State board shall first be made by the Chapters to the Council and final recommendations be made by the Council to the appointing authority; action that, the State Department of Education regulate the scope of architectural courses offered by junior colleges and other institutions in order to prevent the implication that such courses constitute professional architectural training, where such is not actually the case.

In order to better acquaint national A.I.A. officials with the progressive work of the Council in California, the Board of Directors of the A.I.A. were invited to hold their regular board meeting in conjunction with the 1950 annual meeting of the Council; action that, the liaison committee of architects and engineers whose cooperative effort is reflected in state work be continued; and action that, a committee be appointed to work with an interim committee in clarification of overlapping jurisdiction of state bodies.

TO EMPLOY FULL-TIME EXECUTIVE MANAGER

Delegates and members representing the various A.I.A. Chapters throughout California voted at the Palm Springs convention to employ a full-time executive manager who would be in a position to develop and guide a well rounded public relations program for the Architectural profession and thereby command a more powerful voice in State affairs.

Support of such a program was given by Ralph Thomas Walker, national president of the A.I.A., who told the convention, "The staff in the Octagon expects you in the Chapters to bear the load of public relations. Public esteem can be built on individual competence only. . . . Individual competence can best be used and developed at Chapter levels, and each Chapter should do its own thinking on that basis."

Many architects and guests in addition to the 500 registered at the convention, attended some particular session and participated in discussion in which they had a patricular interest. Others took advantage of the fine weather and comfortable surroundings and extended their stay at Palm Springs to an additional day or so of rest and relaxation.

The Convention started with a tour of the area on Sunday afternoon with visits being made to various homes designed by local architects John Clark and Albert Frey, and the firm of Williams, Williams and Williams. Other homes visited as outstanding examples of California "out-door living" included the John Clark home and one designed by Architect Richard Neutra of Los Angeles.

In the evening a cocktail party on the patio of the Desert Inn afforded an opportunity for delegates and guests to meet and become better acquainted with Adrian Wilson, president; Wayne Hertzka, vice-chairman; Robert Ainsworth, secretary-treasurer, and James H. Mitchell, A.I.A. regional director of the Siera-Nevada District, and hosts for the occasion Mr. and Mrs. Frank Hope of San Diego, and Mr. and Mrs. Louis Bodmer also of San Diego.

Immediately following was the "Speaker's Dinner" featuring an excellent talk by Don Lyons, San Francisco president of the Producers Council in which he pointed out the many advantages accruing to both groups from the joint programs undertaken by both organizations. Some of the projects, Lyons pointed out are being adopted by the construction industry on a national scale, while other activities are becoming an important part in many basic educational programs.

Lyons also described briefly the growth of the Producers Council on a national scale, and the particularly active Chapters on the West Coast.

Thomas S. Holden, eastern magazine publisher, spoke on "The State of the Nation" and offered many statistics on consumption of durable and non-durable goods over a period of years to show the favorable position business was in at the present time. He predicted, however, that next year

will see a slight decrease in certain phases of the construction industry and within a comparatively short time some of the more or less uncertainties of business based upon political action, or lack of action, may be clarified and the will of the people more definitely known.

Vincent Palmer, past-president of the Council, served as master of ceremonies and Charles Farrell, mayor of Palm Springs, officially welcomed the architects. Seated at the speakers table were Mr. and Mrs. Andrew T. Haas, San Francisco; Mr. and Mrs. Gene Gach, Los Angeles; Mr. and Mrs. Vincent Palmer, Los Angeles; James Geggie, Desert Inn, and the speakers.

The second day opened with the customary breakfast for official chapter delegates and was followed by the opening business session presided over by Walter Hagedohm, who introduced speakers Neal Van Sooy of Palo Alto and Albert C. Martin, Jr., president of the Southern California Chapter, Los Angeles.

Van Sooy, a former newspaper publisher, told the architects that in giving a "story" to the local newspaper it was highly important to stress the local news value. He advocated a better personal relationship with the local newspaper editor and publisher and cautioned the architects against a short sighted policy which might prevent use of advertising space under the guise of "ethics", declaring "Advertising is just a method of telling the public about yourself and your products."

Martin reviewed the results of a comprehensive study made on the matter of employing a full-time executive manager to stimulate public interest and confidence in the architectural profession, and offered a tentative program for consideration which the assembly approved with recommendations that the officers of the Council take similar action.

The annual Women's Architectural League luncheon was presided over by Mrs. Donald B. Kirby, vice-president in the absence of Mrs. Helen White, president.

The organization which is comprised of the wives of practising architects, has an enviable record of accomplishments and presented as the principal speaker Leslie Thomas of Hollywood who chose as his subject, "Hollywood Discovers Architecture". He traced the history of the motion picture industry from its beginning to the present time and told of the increasing influences of architecture and architects in the making of pictures which have general public approval. James Anderson, president of the East Bay Chapter, acted as the master of ceremonies.

Seated at the speakers table were: Mr. and Mrs. Albert C. Martin, Los Angeles; Mr. and Mrs. C. J. Paderewski, San Diego; Mr. and Mrs. Henry Howell, Santa Barbara; Mr. and Mrs. Adrian Wilson, Los Angeles; Mr. and Mrs. Frank Mayo, Stockton; Mr. and Mrs. Donald B. Kirby, San Francisco; Mr. and Mrs. James Anderson, Oakland; Mr. and Mrs. J. C. Simms of Honolulu; Mr. and Mrs. Malcolm D. Reynolds, Oakland; Ralph T. Walker, New York, president of the A.I.A.; and the speaker.

Tuesday morning's business sessions were devoted to a discussion of Schoolhouse problems, and Public Housing with John Rex serving as chairman.

A comprehensive resume of the accomplishments of the Advisory Committee on School Planning was presented by chairman Henry Wright, who introduced Dr. Charles W. Bursch, chief of

(See Page 27)

A. I. A. PRESIDENT DECLARES "ARCHITECTS TAKE ACTION"

Ralph T. Walker, president of the American Institute of Architects, and a member of the architectural firm of Voorhees, Walker, Toby, and Smith, New York, speaking at the Tuesday, November 8th luncheon of the California Council of Architects convention in Palm Springs, told delegates that Federal government trends as far as the architectural profession are concerned are "serious".

"If you take a job under the new fee schedule as proposed by the housing authorities in Washington, you can not conduct your business," he declared. "In New York, for example, for a 500 family project, the take-home income after Federal taxes would be $12,000 a year. But under the new fee schedule it would be $2100. And the joker is, the architect pays for the blue prints. Thus the architect would lose $4000 a year."

Walker declared, "We are going to fight this situation, and I want your help."

Speaking of the A.I.A., Walker reported the offices in Washington were extremely busy and accomplishing a great many things for the architects of the nation. "The American Institute of Architects is the first professional society in Washington to have a building of its own, and the Octagon Building is one of the outstanding pieces of architecture in Washington." Plans for buliding expansion include provisions for receptions and entertainment, and "everything should be in order for the convention next May."

Walker urged members of each Chapter to "bear the brunt of a sound public relations program," in order that those with whom the architect comes in contact with in the ordinary course of business will "have a better understanding of the rightful place of the architect in the construction industry."

In closing Walker reported "The A.I.A. must be interested in the education of the architect from the moment he enters the field until he retires or dies. If we are responsible for the education of the profession, we must act as if we were, or it will be taken out of our hands. Many say that our schools turn out badly trained men. We have formed a committee under an impartial chairman to make, with the aide of Carnegie funds, a comprehensive study of the facts."

THEO. B. CARROLL, FRANK M. SMITH, PERRY B. JOHANSON, Architects

UNITED BRETHREN CHURCH

Everett, Washington

Illustrates the remarkable effect obtained by designing the arches to get full benefit of height, lofty, spire-like ceiling.

NEW STYLES IN CHURCH ARCHITECTURE ARE SET BY WESTERN ARCHITECTS

By ARTHUR W. PRIAULX

The classical beauty, the lofty simplicity and the dignified informality identified with traditional church interiors throughout the ages has been recaptured by western architects in what amounts to a virtual revolution in design.

In less than a decade, the introduction of a completely new structural material, glued and moulded arches of wood, has opened up amazing new fields for the ingenuity and imagination of the individual designer.

Today more and more western architects are adopting these astoundingly flexible arches to

Glue laminated arches attained lofty, cathedral beauty in the Bethel Lutheran Church at Los Angeles by Architects Quintin and Westberg.

The boomerang arch in the Hollywood Congregational Church with graceful build-up of the elbow by glue lamination technique offers many unusual opportunities in the design by Architects Butler & Butler.

their churches. Not only are they impressive, but they are functional. They have the added advantage of fitting into restricted church building budgets, for they are relatively inexpensive and eliminate costly subsidiary construction.

Two progressive western manufacturers, one in Portland, the other in Los Angeles, have pioneered in the development of effective glueing techniques and improved manufacturing processes to offer architects a wide variety of classical and informal arch forms to fit every possible requirement in the field of ecclesiastical building.

Hundreds of western churches have been built during the past ten years with these charming arches which lend themselves so readily to flexibility in design that almost any shape can be accomplished that is necessary to fit in with any particular style of architecture in the subject building.

A variety of standard styles are offered by the manufacturers. Probably the most popular are the cathedral trusses, the Tudor or "boomerang" arches, and variations of the Gothic. Traditional and classical forms can be matched with exactitude. The arches can be built to almost any size and style by the new methods of moulding the laminated timber as it is being built up in huge shaping presses.

An attractive slenderness can be achieved because of the higher strength of the laminated assemblies. Curvature and taper and integral corbelling and deepening of sections can be accomplished with full utilization of parallel grains of the wood. By using kiln-dried Douglas fir lumber, shrinkage and related effects of seasoning have been virtually eliminated. Glued lamination offers an improvement on the most versatile building material produced by nature yet loses none of the admirable qualities of wood.

Ingenuity of the designer is practically the only limitation in the development of structural forms which can be built up with new glueing techniques. Modern exposed timbering, tapered cantilevers, rigid frames and constant-strength beams are only part of the many advantages of this new material.

Actual assembly of glued arches is carried on with amazing accuracy. Laminations are kiln-dried and specially surfaced prior to the glueing operation. Glued laminated assembly permits laminating in width, depth and length and contact surfaces are matched to a close tolerance. End

jointing of laminations in a section is done by special milling and shaping. Casein and other water resistant glues are used for interior and protected surfaces and phenolic and exterior type glues are used where the members will be exposed to the weather.

Thickness of the laminations, that is whether the member is to be built up of one-or two-inch lumber, or other thicknesses, is determined by the radius of curvature required in the finished arch. Even drying of the glued surface is assured by radio frequency apparatus, for both pressure and heat are necessary. By applying internal heat through the medium of the radio frequency arc, the glue line becomes stronger even than the wood itself.

There is almost no limit to the size in which these arches can be designed. And there is almost no limit in the curve and design into which they can be moulded.

Donald W. Edmundson, outstanding Portland architect, who has built more than fifteen northwest churches with glued laminated arches, and who built his first one in 1944, believes the glued truss will mark a new period in church construction. (See illustration, Page 22).

He points out that the glued arch is a simple, clean and inexpensive way to use modern material. He says the arches make the most rigid possible building with no bulge. He prefers to design his churches to take full advantage of the beauty of wood and leaves the arches exposed. He has a variety of recommended finishes; natural, stained, varnished or bleached. Another feature he likes about the arches is the ease of installation. The arches come completely formed, fitted and shaped. All are wrapped in heavy building paper to protect the outer surface during shipping. Erection is simple and quickly accomplished.

J. H. Fleming, Glendale, California, architect, says the glued arch has a very definite appeal in small church interiors because of its simplicity and honesty. Where economy is essential, as it is in practically all small churches, the glued arch permits the desirable height of the interior although the budget often restricts the height of the walls. (See illustration, Page 21).

Architect Fleming adds that the arches carry out the modern move toward functional design yet keep recalling the traditional feeling still inherent in the orthodox church ritual.

"Modern architecture," Fleming says, "though

Seattle's St. James Lutheran Church by Architect C. F. Nelsan offers still another evidence of individual designing of church interiors with glue laminated arches. Arches form both roof and wall support.

rightly making rapid strides in American commercial and residential architecture, is bound to lag in orthodox church design. The orthodox church is the mother of the traditional styles. The styling of the robe of the priest, the chant of the ritual, the housing of the tabernacle hold fast to tradition."

Architect B. H. Anderson, of Pomona, California, who has done much with glued arches in church design, says that economy is the watchword in church construction and that glued laminated arches offer that advantage in addtion to the many other assets inherent in this new material.

An idea of the great flexibility of glued arches and the ease with which they fit into almost any church design is pointed out by John S. Butler, a partner in Butler and Butler, architects of Los Angeles. (See illustration, Page 18).

"This interior is of the new Lash Chapel for the Hollywood Congregational Church," Butler says, "the exterior of which is Renaissance period and Spanish or Mediterranean Style. It is interesting to note that through the use of glued and laminated arches it was possible to secure a modified Gothic interior and still retain the exterior style to blend with the existing buildings.

"All horizontal, as well as vertical, roof trusses are carried to the foundation by these laminated arches, thus eliminating unsightly diagonal bracing," Butler said. "In this structure the exposed wood purlins carry a wood plank ceiling, a layer of aluminum foil insulation, two-by-two inch spacer strips and solid diagonal roof sheathing over which the tile roof has been laid."

Architct Butler went on to point out that the interior effect was one of lofty simplicity. The structural design of laminated arches seemed to

In his Inglewood First Baptist Church, Architect Douglas McLellan, has acquired both extra width in the main church room as well as desired height with this unusual use of the V-type glue laminated arch.

The First Lutheran Church of Ontario, California, which was designed by Architect John H. Fleming, emphasizes the variety of possibilities of the use of glue laminated arches.

lend itself naturally to pleasing proportions, Butler said. In this case the arches, wood purlins and ceiling planks were stained to blend with the church furniture of ash hardwood.

Edwin Quintin of the architectural firm of Quintin and Westberg of Alhambra, California, says the use of glued trusses is economically sound and at the same time consistent with modified Gothic design. (See illustration, Page 17).

Probably one of the most beautiful and distinctive of the new western churches utilizing the gracious arches is the Bethel Lutheran Church of Los Angeles designed by Quintin and Westberg. For sheer grace and charm and novel introduction of new design trends it is outstanding.

One of the most beautiful of the new churches constructed with glued trusses is the St. Paulus Evangelical Lutheran Church of Oakland, California, which the late H. A. Schary designed . (See illustration, Page 23).

The Central Church of Christ, Long Beach, designed by James R. Friend, Long Beach architect, combines simplicity with spiritual dignity and uses the boomerang type arch with effectiveness.

An unusual use of the V-type arch is to be found in the First Baptist Church of Inglewood, California, where Architect Douglas McLellan has achieved remarkable results. (See illustration, Page 20).

Ray Lancaster, Portland architect, is another of

the growing group of northwest designers who are using glued arches with marked success. Lancaster's churches in Oregon and Washington are models of originality and beauty. Lancaster's churches of today, with their factory fabricated arches are great improvements over the hand-glued arches first used in the northwest at Seattle in 1938.

Down at Santa Ana, California, Architect George J. Adams has achieved charming effects in the St. Anne's Parish Church. Here is an excellent demonstration of laminated arch use in small church design. The lofty ceilings are attained without extraordinary expense in building. Cathedral heights in small structures were not possible without excessive cost until the development of this shaped truss which provides both the strength and rigidity required in the frame of the church and the additional attribute of beauty.

Design motif can be fulfilled with the new arch without in any way sacrificing general utility or economy.

One of the features about the glued-up truss which appeals greatly to architects is the ease with which it fits into basic design. Arch bases can be set on foundations so that they form either the wall of the outer structure or they may be set so they become an attractive part of the chapel room. Strength of beam too can be built into the arch to fit the particular and peculiar needs of the structure under design. A camber can be built in to offset deflection or a haunch can be formed at the end to give greater shearing strength if needed. The laminations can be added at the elbow to develop almost any desired effect and structural requirement.

While the glued laminated beams can be made of lumber of any thickness, the largest advisable piece, even for the heaviest arches, is not generally over two inches in thickness. The beams can be built up of random widths and random lengths, with end joints scarfed or butted. One point watched carefully by manufacturers is that staggering of joints in adjoining layers of laminations is strictly required.

Arches are built with scientific precision. In a curved arch, the maximum desirable thickness of a lamination is a ratio of radius of curvature to thickness of lamination of 150 or more. Initial stresses from bending to curvature adjust themselves to a considerable extent after bending.

This astounding new structural material, end product of western technical ingenuity, has captured the attention of many regional architects. If

Striking exomple of the effect of exposed wooden arches is seen in Portland's Mock's Crest Community Church, which hos been designed by Architect Donold W. Edmundson to copture the charm of the English country church.

All of the dignity and grace of wooden beams and arches with the richening patina of the years has been designed into the St. Paulus Evangelical Church of Oakland, by the late H. A. Schary, Architect.

the present rate of acceptance by western architects is any forecast of future popularity, then glued arches promise to provide the basic material for startling new trends in design not only in church structures, but in a wide variety of commercial and public buildings where clear spans are needed. In fact, the popularity of glued arches is already as acceptable in these fields as in the specialized design of churches.

Ecclesiastical Furniture

The manufacture of ecclesiastical furniture combines the oldest techniques of woodworking with the most modern machinery. The methods used by Joseph before Christ are still used to a limited extent today. These methods are combined with high-speed machinery to make the production commercially profitable, and while the machinery is readily available, it is becoming increasingly difficult to get workmen whose skill and temperament are suited to this type of work.

This is evident immediately when checking with a San Francisco manufacturer, it was discovered that the average age of workers is fifty-five years, and that most of the men have been in the trade thirty years or longer. With a few exceptions, they started as apprentices in Europe, representing eleven nationalities and as many temperaments, and learned their trade under most exacting conditions.

There are no shortcuts to good shop practices in the manufacture of individual pieces. Machines are used only to dimension boards to the proper sizes and to run mouldings and trim. The majority of the work is done by hand. Since each piece is

designed for a particular purpose and to fit an existing architectural theme, the common practice of mass production can not be utilized. Each piece is detailed in a full size drawing by draftsmen from a small scale sketch design.

In the drafting room each piece is listed on a stock bill and given a stock number corresponding to a number given to it on the full-sized drawing. The drawings and the stock bill are then sent to the machine-man who cuts the lumber to the size indicated. From there it goes to the mechanic who is assigned the job of assembling that particular item. One or more men may work on the job of assembly, depending upon the size of the piece and the work involved. Each of the men is a specialist; one on carving, another on intricate gothic filigree design, etc.

After assembly, the piece is sent to the finish room where specialists again take over. Gold leaf or elaborate tapestry design in color may be needed, and a finisher skilled in this particular process is used. The completed item has passed through many hands and each man has contributed his particular skill. It is possible to find many mechanics who can manufacture an item utilizing all of the skills, but this cannot be done profitably. It is only by having individuals develop their particular techniques to a point where their skills reach a balance of speed and technical perfection can the finished items become commercially profitable.

SAINT MATHEWS CHURCH, San Mateo

SAN ANSELMO CONVENT, San Anselmo

Only the best available grades of wood are used, as the proportion of material cost to labor cost makes it economically unwise to practice economy in the choice of materials. A thousand dollars' worth of Oak, for instance, may require five thousand man hours of work, and if through improper drying or inferior grain the finished product should split or crack, the five thousand man hours have, to a great extent, been wasted.

With over fifty varieties of hardwoods available, only five or six are generally used—Walnut, Oak, Mahogany, Birch, Prima-Vera, Ash and Maple being the most common.

Many items such as pews, prayer desks, etc. . . . can be turned out as stock items in production. When items of this type are manufactured a regular assembly line is set up utilizing the high-speed machines and commercial finishers with the result these items are proportionately less expensive.

NOTE: The two illustrations on this page were furnished through the courtesy of STANWOOD INC., San Francisco craftsmen in Ecclesiastical woodwork.

NEIGHBORHOOD OF THE YEAR SELECTION

The second neighborhood development contest to pick the best plans for the new American neighborhood has been extended to January 1st by the National Association of Home Builders which is the sponsoring organization.

Final date for submission of entries has been extended for another month to allow builders and developers extra time to submit their entries, and according to David D. Bohannon, chairman of the Association's Land Planning Committee, the winning plans will be displayed at the NAHB national convention in Chicago in February.

The program is designed to stimulate builders' site plans for actual construction projects that embody attractive layout of homes and apartments and create the best types of neighborhoods for average American families. Emphasis has been placed on "economy housing" and homes for middle and low income families. The contest is being carried out through local home building associations affiliated with the NAHB, and builders entering the contest submit their plans through the local groups, where they are then judged by a panel of experts in this field.

Consideration must be given to enduring values, attractive communities, architectural designs, proper layout of streets and facilities, accessibility, convenient living and proper relationship of land and buildings.

Six general classifications of neighborhood development have been established: Homes under 50 units; homes over 50 units; larger homes under 50 units, larger homes over 50 units; rental housing; and complete community development.

VITAL ROLE OF THE CONSTRUCTION INDUSTRY TOLD BY WINKELMAN

The vital role of the construction industry in national defense was recently discussed by Dwight W. Winkelman, past president of the Associated General Contractors of America.

"It becomes obvious," he said, "that repair and restoration of any damaged facilities would be one of the vital tasks of this country. The rehabilitation would be essential even before new facilities could be produced."

"Should the attempt be made to destroy our factories, our bridges, our water systems and other facilities essential to both production and life, there would be only one source to repair the damage. That would be the construction industry.

"The industry would have to repair damage to existing facilities and restore them to usefulness. It would have to provide men, machines, materials and methods to the Armed Services for construction operations essential to military operations. And, it would have to build any new facilities required."

Winkelman said that considerable planning for this defense necessity already was under way and mentioned cooperation between The Associated General Contractors and the Department of Army, and particularly the Corps of Engineers.

He also emphasized the superiority of the contract method of construction over the use of day labor by government units. The former, he said, was more efficient and cheaper and was in the American tradition of private enterprise.

NEW BUILDING RESEARCH ADVISORY BOARD TO ACT

The new Building Research Advisory Board, and agency of the

Stanwood Inc.

CRAFTSMEN IN ECCLESIASTICAL WOODWORK

CUSTOM-BUILT CHURCH FURNITURE

Our master craftsmen fashion beauty in wood that fits the needs of the most discriminating. Years of experience in this highly skilled field, in cooperation with California's leading architects, is your assurance of the finest in ecclesiastical appointments. Our representative will be glad to discuss custom-built church furniture to your particular needs.

Our long list of satisfied customers is proof that there is no church problem too difficult for us to solve nor any article too small for us to give our fullest attention.

Stanwood Inc.

471 ARGUELLO BOULEVARD • BAYVIEW 1 0937

SAN FRANCISCO 18, CALIFORNIA

National Research Council, has scheduled its first research correlation conference for January 1950 in Washington, D. C., with the major consideration being given to the theme of "Weather and the Building Industry," with climatological research and its effect on building design, construction, materials, and equipment being considered.

Since the weather and climate influence all types of building design and construction, the subject chosen for the conference illustrates the aim of the board to bring men from all fields of building research together with scientists of other fields, for the purpose of exchanging ideas and furthering cooperation in research. Through the conference it is hoped that the requirements of building research for weather data may be defined; and the climatologists, on their part, will explain how such data is obtained and what information is already available.

Among those who will participate in the conference are: Francis W. Reichelderfer, Chief of the U. S. Weather Bureau; Dr. Paul Siple and Dr. Helmut Landsberg of the National Military Establishment.

Glued Laminated Arches

GLUED LAMINATED arches, beams or trusses open the way to unlimited expression of either traditional or modern, functional designs in ecclesiastical buildings; giving the architect as much freedom in designing as he would enjoy with modeling in clay. They are not limited in size or shape. They combine structural strength with quality to meet all appearance and finishing specifications. SUMMERBELL, a pioneer in glued laminated construction, is fully qualified and completely equipped to produce glued laminated units to fulfill all requirements... efficiently and economically. Examples of recent SUMMERBELL glued laminated construction for churches are shown in a new bulletin, available on request.

GLUED LAMINATED CONSTRUCTION, SUMMERBELL BOWSTRING TRUSSES, LAMELLA ROOFS, ALL TYPES OF TIMBER STRUCTURES

Summerbell
Roof Structures

825 EAST 29TH STREET, LOS ANGELES 11 • Telephone ADams 6166

MARBLE INSTITUTE OF AMERICA PRIZE

A prize competition in architecture is being sponsored by the Marble Institute of America in conjunction with Beaux Arts Institute of Design in New York. This Class B problem is entitled "A Court House Lobby."

The competition is open only to architectural students in corresponding schools and ateliers of the Beaux Arts Institute of Design. The problem will be executed by the Students in any five consecutive weeks between October 24 and December 19, 1949, with judgment on January 14, 1950.

Briefly, the problem involves the design of a courthouse lobby 33'0" wide and 75'0" long (center to center of steel) for a city of approximately 100,000. At either end of the lobby are two large court rooms. This problem affords the student the opportunity to study an interior of substantial scale, with particular emphasis on good lighting, refined detail and the decorative qualities of marble, with which other rich materials may be combined in a discriminating manner. Marble is also employed as an exterior facing material for the main entrance.

Prizes to be awarded include: First prize $100.00; Second prize $75.00; Third prize $50.00, and a Fourth prize of $25.00.

NEW INSTITUTE ON TRAFFIC ENGINEERING

The second Western Institute for Traffic Training will be held on the Los Angeles campus of the University of California, January 23 to February 10.

SCHOOL BONDS VOTED. Voters of the Folsom (California) Unified School District have approved the issuance of $380,000 for the construction of a new grammar school building.

LOS ANGELES City Housing Authority has moved to 224 North Main Street, opposite the City Hall, according to Howard L. Holtzendorff, executive director.

California Council of Architects

(From Page 15)

the state division of schoolhouse planning, who emphasized the fact that a great deal of good had been accomplished by the cooperation between architects and school authorities.

Theodore Criley, discussed the Housing Act of 1949, and other speakers on the morning program included Drayton S. Bryant, Paul Hunter, and Rightland L. Felt.

Bryant discussed the Housing situation and outlined the program now underway in Los Angeles to provide government housing at minimum costs under the joint Federal-Los Angeles slum clearance program. There was some discussion on the subject of government housing programs and policies.

The principal speaker at the noon luncheon at which Albert C. Martin, Jr., presided, was Ralph T. Walker, of New York, and president of the A.I.A.

Walker discussed in an informal manner the operations of the national offices of the A.I.A. and the work of the organization in promoting the best interests of the architectural profession.

The annual Sportsmen's Dinner, sponsored by the Producers' Council of San Francisco and Los Angeles, was co-chairmaned by Bert Taylor of Los Angeles and Don Lyons of San Francisco. The dinner, devoted to fun and good fellowship, was a fitting climax to a day of serious business conferences. Prizes were awarded for various sports events which had been held during the convention and following the program the balance of the evening was devoted to dancing at the Shadow Mountain Club.

Among the guests at the speakers table were: Mr. and Mrs. Clarence Van Zandt, Mr. and Mrs. Don Lyons, Mr. and Mrs. James Christie, Mr. and Mrs. Harry W. Whiteley, Harry Williams, Miss Rita Miller, G. Robert Roden, Jr., W. F. Norton, and Harold Smith.

The final sessions on Wednesday were devoted to organization subjects, presentation of resolutions, and the conduct of other Chapter matters which were more or less of a confidential nature.

A swimming exhibition, golf, tennis, horseback riding, horseshoe tournament, moonlight hayrides, folk dancing, and a delicious barbecue dinner and sunrise breakfast contributed to the entertainment and pleasure of the convention, which will go down in the Council records as one of the best in the organization's history.

CALIFORNIA STATE HIGHWAY PROJECTS FOR 1950-51

The California Department of Public Works has released a summary of major construction projects on the state highway system provided for in the 1950-51 fiscal year budget of the California State Highway Commission totaling some $61,702,000, with an additional amount of $20,784,200 being allocated for acquisition of right of way contemplated for construction projects the following year.

Fifty-three of the fifty-eight counties in California are included in the new budget.

SOUTHWEST AIR CONDITIONING EXPOSITION AT DALLAS

New trends in structural design will highlight the Southwest Air Conditioning Exposition in Dallas with more than 200 displays showing the latest in manufacturer's designs and products in the air conditioning field.

Sponsored by the American Society of Heating and Ventilating Engineers the exhibit will extend from January 23rd to 27th.

News and Comment on Art

(From Page 6)

Colin Graham, to December 17th. Classes resume on January 14.

Gallery Tours: Wednesdays at 2:30 p.m. Current exhibitions by Colin Graham and Lilly Weil Jaffe. Tours of the Thorne Rooms on Wednesdays and Thursdays at 10:30 a.m. by Mrs. Ladusca Wilson. Fridays at 2:30 p.m. by Colin Graham and Lilly Weil Jaffe. Special groups by appointment.

ORGAN PROGRAMS: Organ recital by Uda Waldrop every Saturday and Sunday, 3 p.m.

Free Motion Pictures each Saturday at 2:30 p.m.

CITY OF PARIS

Scheduled for exhibit during December is an exhibition of "The Era of Elegance and Splendor" including Impressions of Great Patrons of Art, Innovators of taste, and the Immortals of the Dance, by Paget-Fredericks.

The Pictures of the Month in the Rotunda Gallery are a group of watercolors by Conway Davis, Dong Kingman, and George Post.

SYRACUSE NEW YORK MUSEUM OF FINE ARTS

Thelma Frazier of Cleveland, Ohio, has been awarded a $500 prize for ceramic sculpture representing circus figures, "Juggler" and "Performers". The award was made in conjunction with the 14th Ceramic National Exhibition.

An award given by Richard B. Gump, of San Francisco for the "best designed piece of pottery suitable for mass production", was divided between Mary Scheier of Durham, New Hampshire, for a coffee set and Glidden Parker of Alfred, New York for two casseroles. Each received $250.

A. I. A. ACTIVITIES

American Institute of Architects

Arizona Chapter:
Edward L. Varney, President; Ralph B. Haver, Secretary, 35 W. Oregon Street, Phoenix, Arizona.

Central Valley of California:
Frank V. Mayo, President; John W. Bomberger, Vice-president; Ivan C. Satterlee, Treasurer; William Koblik, Secretary, 2203 13th St., Sacramento, California.

Central Coast Counties Chapter:
Birge M. Clark, President; Lisle Fred Richards, Secretary-Treasurer; Thomas E. Elston, Jr., Chester Root and Henry Morgan Stedman, Directors. Office, 411 Lafayette Street, San Jose.

Colorado Chapter:
Henry J. Von Wyl, President; Charles H. Overholt, Secretary, 2509 W. 36th Avenue, Denver, Colorado.

East Bay Chapter:
James H. Anderson, President; Loy Chamberlain, Vice-President; William Corlett, Secretary; Chester Treichel, Treasurer. Office c/o Sec., Bank of America Bldg., Oakland.

Montana Chapter:
Orr Pickering, President; H. C. Cheever, Secretary, Montana State College, Bozeman, Montana.

Nevada State Board of Architects:
L. A. Ferris, President, Reno; Walter Zick, Secretary, Las Vegas; Directors, Aloysius MacDonald, Las Vegas; Russell Mills and Edward Oarsons, Reno. Office, P. O. Box 2107, Las Vegas, Nevada.

Northern California Chapter:
Donald Beach Kirby, President; W. Roland Gibbs, Secretary. Office 369 Pine Street, San Francisco 4.

Oregon Chapter:
Irving G. Smith, President; Holman J. Barnes, Vice-President; Albert W. Hilgers, Secretary; and Millard H. Schmeer, Jr., Treasurer. Office, 909 Spaulding Building, Portland 4, Oregon.

Pasadena Chapter (California)
Robert H. Ainsworth, President; John N. Douglas, Vice-President; William Ainley, Treasurer, and Burton Romberger, Secretary. Harold J. Bissner, Roland E. Coate, and Edwin Westberg, Directors. Offices 1041 E. Green Street, Pasadena 1.

San Diego Chapter:
C. J. Paderewski, President; Walter C. See, Vice-President; Robert Bradt, Treasurer; George Hatch, Secretary, San Diego Trust & Savings Bank Building, San Diego 1.

Santa Barbara Chapter (California):
Henry W. Howell, President; Wallace Wm. Arendt, Secretary, 236 La Arcada Bldg., Santa Barbara, California.

CALIFORNIA COUNCIL OF ARCHITECTS
Andrew T. Hass, President; Adrian Wilson, Vice-President; Malcolm Reynolds, Secretary-Treasurer: Office 369 Pine Street, San Francisco.

Southern California Chapter:
John Rex, President; John J. Landon, Vice-president; Burnett C. Turner, Secretary; Jack C. Lipman, Treasurer. Chapter Headquarters, 3757 Wilshire Blvd., Las Angeles 5.

Spokane Chapter:
Richard Eddy, President; Victor L. Wulff, Secretary; Carl Johnson, Treasurer. Office 1023 W. Riverside Avenue, Spokane 8.

Utah Chapter:
Howell Q. Cannon, President; William J. Monroe, Jr., Secretary, 3707 South 32nd West Street, Salt Lake City 7, Utah.

Washington State Chapter:
Waldo B. Christenson, President; Perry B. Johanson, 1st Vice-President; Charles T. Pearson, 2nd Vice-President; John M. Morse, Treasurer; and Bliss Moore, Jr., Secretary. Offices 714 American Building, Seattle 4, Washington.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
James C. Simms, President; Alfred Preis, Secretary, 1507 Kapiolani Blvd., Honolulu, T. H.

KRAFTILE is WESTERN HEADQUARTERS FOR

GLAZED STRUCTURAL WALL UNITS
PATIO TILE
SWIMMING POOL OVERFLOW GUTTER
QUARRY TILE
FACE AND ROMAN BRICK
ACID BRICK
ACID-PROOF JOINTING COMPOUNDS
ACID-PROOF COATINGS
BRICKETTES
STRAN-STEEL FRAMING

KRAFTILE COMPANY
NILES, CALIFORNIA NILES 3611
SAN FRANCISCO 5: 50 Hawthorne St.—DOuglas 2-3780
LOS ANGELES 13: 406 South Main Street—MUtual 7241

May we help you plan or estimate?

SOUTHERN CALIFORNIA CHAPTER

Milton Breivogel, Principal City Planner of the Los Angeles City Planning Commission, told members at the October meeting of the tremendous problem confronting the city in providing for future development and outlined several plans under way which were intended to establish an overall plan for eventual solution of the task.

Breivogel pointed out that Los Angeles was the third largest city in the nation today, and has had an increase in population since 1940 of some 500,000 persons.

Also speaking on the Master Plan for the City, which is divided into 47 Districts, Simon Eisner, City Planning Architect and newly appointed Assistant Director of Los Angeles Redevelopment Agency, outlined the importance of urban redevelopment especially in blighted areas.

* * *

Lane D. Webber, Vice president of the Southern California Edison Company; regional vice-president of the National Association of Manufacturers, and chairman of the Association's government spending committee and of its Hoover Commission committee, spoke at the November meeting on the subject: "Socialism Versus Private Enterprise".

It was a splendid follow-up for the outstanding conferences at Palm Springs.

Officers for the ensuing year, selected at the November meeting, included John Rex, President; John L. Landon, Vice-President; Burnett C. Turner, Secretary; Jack C. Lipman, Treasurer; and Henry L. Wright, Paul O. Davis and Walter R. Hagedohm, Directors.

* * *

NEW MEMBERS: Institute Members, Paul H. Ayer, Ernest Crimi, and Albert A. Swartz. Associate Member, Arthur J. Bendon, and Junior Associate, William E. Lindstrom.

WASHINGTON STATE CHAPTER

The A.I.A. Board of Directors have selected Seattle for the 1953 A.I.A. Convention, and already President Christenson and members are making plans to entertain the nation's architects in true western hospitality.

* * *

A motion picture film on "Machine Plastering" was shown at the November meeting, and according to Joe Jefferson, chairman of the Education Committee, this new development will "revolutionize the building industry".

* * *

The first complete round of the Bowling League, 27 games, saw the team of Mallis, DeHart & Hopkins No. 1, leading the league with 18 games won and 6 lost. In second place was the Stuart & Durham team with 15 wins and 8 losses, and crowding them in third place was the W. H. Witt Company team with 15 wins and 9 losses.

* * *

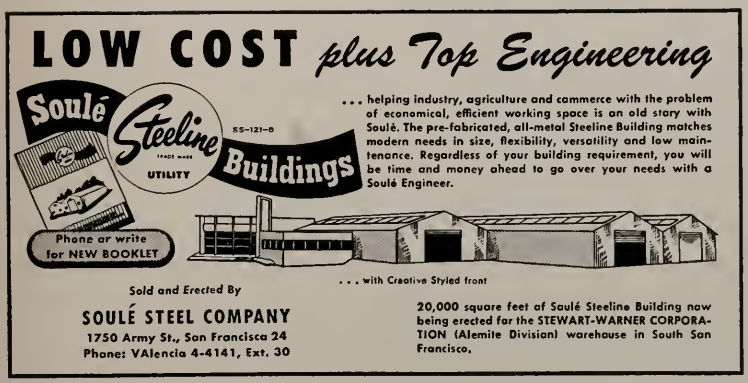
NEW MEMBERS: Associate, Kenneth H. Gedney. Associates (Junior), Albert O. Bumgardner, Kauko E. Kauko, Richard T. Newport, Roderick G. Parr, and George E. Wrede. Associates (Student), Donald W. Congdon, Stephen M. Dam, Harry F. Gehring, Jr., and Edward H. Hall.

ARCHITECTS DESIGN CONTEST

Many architects, draftsmen, designers and students have signified their intention of submitting designs in the $5,000 architectural prize competition being offered by the Timber Engineering Company, Washington, D. C., for the best designs (in wood) of an eight family, garden type apartment.

Closing date of the contest is January 15, 1950.

It's new!
...just the right height for children
Here, at last, is a drinking water cooler designed with the child in mind. Architects and school building authorities will appreciate its convenience in school cafeterias. The LO LEVEL comes in various models for cafeteria use and as a combination cooler and fountain for drinking use.
Just the right height for children. Foot-pedal operation makes it easy for child to hold tray and still fill glass with water. Faster serving, less confusion, low-cost operation.
Write for full information.
THE HALSEY TAYLOR CO., WARREN, OHIO
Largest Exclusive Manufacturer of Drinking Fountains in the World
HALSEY TAYLOR
LO-LEVEL
Coolers
5-6
West Coast Plant, Redlands, Calif.


LOW COST plus Top Engineering
Soulé
Steeline
SS-121-B
UTILITY
Buildings
... helping industry, agriculture and commerce with the problem of economical, efficient working space is an old story with Soulé. The pre-fabricated, all-metal Steeline Building matches modern needs in size, flexibility, versatility and low maintenance. Regardless of your building requirement, you will be time and money ahead to go over your needs with a Soulé Engineer.
Phone or write for NEW BOOKLET
... with Creative Styled front
Sold and Erected By
SOULÉ STEEL COMPANY
1750 Army St., San Francisco 24
Phone: VAlencia 4-4141, Ext. 30
20,000 square feet of Soulé Steeline Building now being erected for the STEWART-WARNER CORPORATION (Alemite Division) warehouse in South San Francisco.

WITH THE ENGINEERS

Structural Engineers Association of Northern California

Jesse Rosenwald, President; Arthur W. Andersoon, Vice-President; Franklin P. Ulrich, Treasurer; George E. Solnar, Jr., Secretary; and Directors Henry J. Degenkolb, John E. Rinne, George A. Sedgwick, Harold O. Sjoberg, and John A. Blume.

American Society of C. E. San Francisco Section

A. W. Earl, President; G. B. Woodruff, Vice President; C. T. Wiskocil, Vice President; R. D. Dewell, Sec-Treas: Secretary Office 604 Mission Street, San Francisco.

Structural Engineers Association of Southern California

Harry W. Bolin, President; E. C. Hillman, Vice-President; Robert Short, Secretary-Treasurer. Directors: S. B. Barnes, Lewis Osborne, John Case, Harold P. King, and Donald F. Shugart. Office: 202 Architects Bldg., Los Angeles 13, Calif.

Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nicherson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

The November meeting was devcted to a discussion of a Report of the Joint Lateral Force Committee of the Structural Engineers Association of Northern California and the San Francisco Section of the American Society of Civil Engineers with speakers comprising John E. Rinne, Chairman, Arthur W. Andersen, and John A. Blume.

* * *

The Association won the new gold and silver trophy for convention attendance at Yosemite this year. The plaque is to be given for best attendance each year at the SE annual convention.

* * *

Proposed by-laws for the San Francisco Engineering Council were submitted and approved at the last Board meeting.

* * *

NEW MEMBERS: Member, James P. Hawke. Junior member, Harold S. Kellam.

* * *

Officers for the ensuing year, to be elected at the December meeting include: Arthur W. Anderson, President; John G. Little, John E. Rinne, Vice-President; and Walter L. Dickey, F. W. Kelberk, Jack N. Long, and Howard A. Schirmer, Directors.

Recognized Everywhere!
IT'S HAWS FOR HIGHEST QUALITY
• Best Materials
• Finest Workmanship
• Trouble-free Valves and Fittings
• Complete Sanitation
Write today for '49 HAWS Catalog.
Specify HAWS—and be sure!
HAWS SANITARY DRINKING FOUNTAINS
ELECTRIC WATER COOLERS
HAWS DRINKING FAUCET CO.
1435 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA
Agents and Sales Representatives in All Principal Cities

PUGET SOUND CHAPTER AMERICAN SOCIETY FOR METALS

Dr. Alexander Finlayson, Chief Metallurgist and Technical Director of the Pacific Car and Foundry Company at Renton, Washington, addressed the November meeting of the Society on the subject "Cast Iron Crankshafts".

A few years ago, according to the speaker, cast iron reciprocating crankshafts were a thing of wonderment to designing engineers and metallurgists alike, while today they are a common product in many uses.

Economically the cast shaft is cheaper than the forged shaft due to machining losses.

Dr. Finlayson illustrated his talk with numerous lantern slides.

AMERICAN SOCIETY OF CIVIL ENGINEERS SAN FRANCISCO SECTION

John F. Newell, Sanitary Engineer of the United States Atomic Energy Commission, was the chief speaker at the October meeting of the San Francisco Section ASCE, his subject being "Atomic Pollution Waste Disposal".

Many new problems in the field of sanitary engineering have developed as a result of atomic forces, some of which have yet to be solved.

F. R. Hewes and Reidar Olaisen have become MEMBERS: Herbert J. Rokita, ASSOCIATE MEMBER; and Sal E. Cooper and Joseph Kaplan, JUNIOR MEMBERS.

CALIFORNIA CHEMIST AWARDED 1949 NOBEL PRIZE

Dr. William F. Giauque, professor of chemistry on the Berkeley campus of the University of California, has been awarded the 1949 Nobel Prize in chemistry by the Swedish Academy of Sciences.

The Nobel Prize, which carries a stipend of approximately $30,000, was awarded to Professor Giauque for his research on the nature of matter at very low temperature. Through experiments it is now possible to determine action of matter at temperatures as low as 406 degrees below zero.

COMPETITIVE SCHOLARSHIPS ANNOUNCED BY AISC

Award of 10 annual competitive scholarships of $1000 each in American colleges and technical schools has been announced by the American Institute of Steel Construction as a part of a comprehensive educational program.

Scholarships will be given in 1950. Objective of the program is to train engineers and administrators for the fabricated structural steel industry, but recipients of the scholarships are not committed to continue in the industry after graduation.

KANSAS STATE COLLEGE UNVEILS PLAQUE

A bronze-relief portrait of Dean Emeritus Roy A. A. Seaton of the Kansas State College, School of Engineering and Architecture, was recently unveiled in the main corridor of the Engineering Building, with many noted engineers taking part.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The new motion picture "Build With Steel", produced for the AISC, made its premier West Coast showing at the December meeting.

STRUCTURAL STEEL

For Class A Buildings, Bridges, etc.

JUDSON PACIFIC-MURPHY CORP.

4300 EASTSHORE HIGHWAY
EMERYVILLE, CALIF.

Gift Subscription For Christmas 1949

As a service to its readers GIFT SUBSCRIPTIONS to ARCHITECT & ENGINEER magazine are available for this year's Christmas giving.

REGULAR SUBSCRIPTION Rate will apply:

United States and Pan America $3.00 a year; two years $5.00

Foreign countries $5.00 a year

PLEASE SEND ARCHITECT & ENGINEER AS A GIFT To:

name occupation

address city zone state

Sign my gift card: From

name occupation

address city zone state

Sign my gift card: From

name occupation

address city zone state

Sign my gift card: From

Your Name

address city zone state

Enclosed is my check for

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Don W. Lyon, Libbey-Owens-Ford Glass Co., 116 New Montgomery Street
Vice-Pres., George E. Conley, Johns-Manville Sales Corp., 116 New Montgomery Street
Secretary, H. C. Galitz, Westinghouse Electric Corp., 410 Bush Street
Treasurer, A. J. MacJennett, Mueller Brass Company, 475 Ninth Street

Edited by J. Wilson Peele, LEATHAM & PEELE BUILDING PRODUCTS

INTRODUCING!

THE CHRISTMAS JINX

Culmination of a Successful Year!

None of us will ever forget the riotous evening of November 30th, when the Producers' Council gave it's 11th Annual Christmas Jinx at the Hotel Claremont in Berkeley. The pictures taken that evening will vouch for the fact that our members can go all out for fun and entertainment when called on to do so. This, the last program of the year, was given by a very able committee, headed by Chuck Kraft as General Chairman, ably assisted by Jerry Barr, Ray Brown and George Conley.

The cast included Jim Ferguson, Howard Noleen, George Conley, Jack Armstrong, Clyde Cornell, Bill Lewis, Carl Frank, Herb Duncan, Jim Anderson, and cute little Art Staat. As one writer told your editor, there is just no use in trying to describe the portrayal by Art Staat of the little old lady who was literally lit up.

We couldn't keep up with George Conley, as he was so busy changing costumes and characters. As a matter of fact, George was literally shooting at himself.

There was a report that three gentlemen "were not able to appear".

Don Lyon reported, when he was introducing his staff, that it would be his last official act as President. Your editor knows that he can speak for the entire Council when he says Don has done a splendid job, and he has had all the support he needed from his staff of officers. George Conley, Vice-President, Herb Galetz, Secretary, Mac MacJennett, Treasurer, and also those who have served him faithfully on various committees.

May you editor take this opportunity of thanking those who have given him assistance when asked, and in retiring from this position, he would also like to extend best wishes to his successor.

A Very Merry Christmas and Happy New Year

to all our members and our friends in the A. I. A.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

(From Page 9)

must be selected so as to fairly indicate the behavior of the prototype.

Time will not permit discussion of any of the other types of physical property determinations. We must continue to the end result, which is the primary interest of the practicing engineer. Wherein can soil mechanics and the engineer practicing in this field aid the designing engineer in reaching practical and economical solutions to his problems, and how closely can the designing engineer rely on these solutions.

By means of a sufficient number of borings, carried to adequate depths, and logged under the supervision of trained engineering personnel, the distribution and extent of those strata underlying any site and having an influence on the foundation behavior or construction, can be determined to any required degree of accuracy.

By "adequate depth", we mean at least to that depth below which the soils will not be subject to any significant deformations under the action of the stresses imposed by any probable foundations that may be designed to support the proposed structure.

The number of borings will vary with the purpose for which they are drilled. If the site is one that, from geologic evidence, should be relatively uniform from the standpoint of stratification, and the purpose of the investigation is to provide a prospective purchaser with general advice on the suitability of the site for his planned purposes, the borings may be few in number. More borings will be required if the purpose is to provide sufficient information on the variation of soil conditions over a large industrial site so as to enable studies of the arrangement of structures which will best take advantage of the varying foundation conditions. If the purpose be to provide sufficient information for the detailed design of the structures, then the borings must be sufficiently close to enable the interpolation of stratification between borings to the requisite degree of accuracy. If the structure being designed be light and flexible, and involves only a moderate expenditure for its foundations, economic good sense may indicate the spending of a minimum sum on explorations, accepting a low degree of accuracy in the data obtained, and adopting a very conservative foundation design in view of the large factor of ignorance. On the other hand, if the structure to be erected be heavy, sensitive to differential settlement, represents a large investment, and the effects of partial or temporary impairment of its use be serious, the spending of large sums for closely spaced borings which will permit more or less exact determination

(See Page 36)

When you specify CERTIFIED ADEQUATE WIRING in building plans, you provide your clients with more than simply heavy enough wire, enough outlets, switches and circuits. You add greatly to their comfort, health and safety . . . benefits too large to be measured in dollar signs.

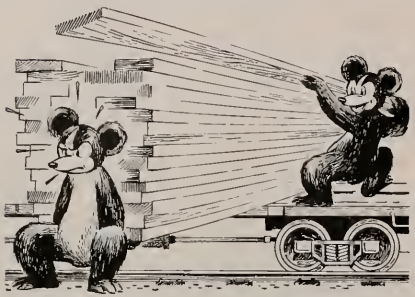
One requirement of CERTIFIED ADEQUATE WIRING, for example, is a built-in bathroom heater to chase away the chill when bodies are most exposed to attack by colds, "flu" and other sneezing diseases. In other rooms, too, a built-in electric heater is an inexpensive protection.

When you explain that Adequate Wiring offers them health insurance at such small cost, your clients will agree with you that good wiring is a good investment . . . not to be sneezed at.

NORTHERN CALIFORNIA ELECTRICAL BUREAU

1355 MARKET STREET SAN FRANCISCO 3

HONEST GRADING...
no substitutes



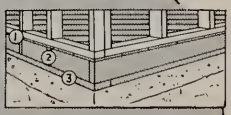
E. K. WOOD LUMBER CO.

GENERAL OFFICES: P. O. Box 1618, Oakland, California
LOS ANGELES Office and Yards: 4710 S. Alameda St.—JE3111
OAKLAND Yards and Wharves: 727 Kennedy St.—KE4-8466
PORTLAND Mill Sales Office: 827 Terminal Sales Bldg.
SAW MILLS: Roseburg, Oregon • Reedsport, Oregon

RETAIL YARDS: LOS ANGELES • OAKLAND • ONTARIO • HOLLYWOOD
LONG BEACH • RIVERSIDE • TEMPLE CITY • SIERRA MADRE • INDIO
THERMAL • VAN NUYS • WHITTIER • PASADENA • SAN PEDRO

YOU PROTECT THESE WEAK SPOTS
from termites and decay

1. SUB FLOOR
2. FLOOR JOISTS
3. MUDSILL



WHEN YOU SPECIFY..

Refer to 1949-1950 AEC Catalogue for Complete specification data

J. H. BAXTER & CO.
333 MONTGOMERY ST. - SAN FRANCISCO 4, CALIF. - DOuglas 2-3883

HEADLINE NEWS & VIEWS

By E. H. W.

"WITH teamwork and public approval, progress in sanitation in the next decade should dwarf all accomplishments to date:"—Iler J. Fairchild, sec. Plumbing Fixtures Ass'n.

* * *

THE first iron made in the U. S. more than 300 years ago was good iron, although somewhat more brittle than today's product, according to the American Iron & Steel Institute.

* * *

ANOTHER round of wage increases, coupled with the impact of the new public housing program on construction demand, will send the price of houses up next year, is the belief of the National Association of Home Builders.

* * *

MORE than 1000 city, state, and federal officials attended the 16th Annual Meeting of the National Association of Housing Officials in Boston recently, to participate in the launching of a nationwide multi-billion dollar housing and redevelopment program.

* * *

NEW president of the National Lumber Manufacturers Association for 1950, is H. M. Seaman, prominent Texas lumber manufacturer, and president of the Southern Pine Association.

* * *

PRELIMINARY FHA reports for October disclose an unprecedented continuation of the 1949 upsurge in home building throughout the U.S. — Franklin D. Richards, FHA Commissioner.

* * *

THERE are 34,248,000 dwellings in the nation of a nonfarm class: 5,600,000 of which are need of repair and remodeling to make them conform to today's living requirements. 630,000 homes must be built each year to take care of minimum new family needs.

* * *

MORE than 3-million acres of Douglas Fir region have been dedicated as Tree Farms since 1941.—V. H. Simpson, West Coast Lumberman's Ass'n. vice-president.

* * *

WESTERN Oregon and Washington's 1,675 sawmills in 1948 broke lumber production records which have stood since 1929—representing products worth $690,000,000.

* * *

CONTINUING record breaking construction of new homes and apartments will probably make 1949 the all-time peak year for home building in the United States.

IN THE NEWS

CALIFORNIA SEEKING INDUSTRIAL ENGINEER

The California State Personnel Board has announced the examination early in January for the position of associate industrial hygiene engineer to assist in planning, assigning, and supervising the work of engineers engaged in the studies of health hazards in industries.

Complete information may be secured from the State Personnel Board in Sacramento, San Francisco, and Los Angeles. Salary range $415 to $505.

SCHOOL BOND ELECTION TO BE HELD IN JANUARY

The San Rafael (California) Board of Education will ask the voters of San Rafael to approve the issuance of $1,375,000 at a special election on January 17th, for the purpose of building three new grammar school buildings and for the construction of additions to some of the existing schools.

NEW LODGE BUILDING PLANNED FOR LODI

The Oddfellows Hall Association of Lodi (California) are constructing a new Lodge Building at a cost of $100,000, according to Elmore G. Ernst, Stockton, architect.

The two story building is being built by the Nomellini Construction Company of Stockton, general contractors.

APARTMENT PERMIT SAN FRANCISCO

The 1080 Chestnut Corporation of San Francisco has applied to the City of San Francisco for a permit to construct a class 1-B, 14-story, structural steel frame and reinforced concrete apartment building on Chestnut street near Larkin.

Estimated cost of the project is $1,000,000, according to the Empire Construction Company, general contractors.

The building will contain 56 apartments.

SCHOOL BIDS REJECTED

A bid of $250,000 for the construction of an 8-classroom, office, auditorium, music room, and toilet high school building in Winters (California) has been rejected, according to the Winters Joint Union High School District.

Chas. F. Dean, Sacramento, is the architect.

NEW EYE WASH FOUNTAIN BY HAWS

Haws eye wash fountain, with shower attachment, is a new safety device for employees of industrial plants, designed in cooperation with safety engineers of a large, well known chemical plant. The fixture has been thoroughly tested and proved. Special regulators which govern both the pressure and volume of water assure an ample eye-bath without danger of injury to the eyes from excessive pressure. The device instantly but gently delivers a twin stream of clean water into the eyes of a worker who accidently gets chemicals or foreign matter into his eyes.

ARCHITECT SELECTED: Ernest L. McCoy, architect, Bakersfield (California) has been selected to design a group of buildings for the Taft High School.

ILLUMINATION IN THE MAKING
SEPARABLE HOOD SIGN REFLECTOR
HEAVY DUTY VAPORPROOF REFLECTOR
THE EDUCATOR MFD. UNDER SILVRAY PATENT NO. 2303747
RLM STANDARD DOME REFLECTOR
THE SIRIUS
RLM SOCKET TYPE GLASSTEEL DIFFUSER
THE MASTER FLOODLIGHT

A simple step in the process of manufacture... some might take it for granted...we don't. The careful, precision forming of a reflector neck is an important process to the man at whose machine a veritable catalog of Smoot-Holman reflectors and luminoires begins to take shape.

SMOOT-HOLMAN COMPANY
SMOOT-HOLMAN
INGLEWOOD, CALIFORNIA
MADE IN U.S.A. ®

Offices in Principal Western Cities—Branch and Warehouse in San Francisco

SISALKRAFT
REG. U. S. PAT. OFF.
"More than a building paper"
THE SISALKRAFT CO.
205 West Wacker Drive
Chicago, Ill.
55 New Montgomery Street
San Francisco, Calif.

CEDARWALLS
RED CEDAR
SIDE WALL SHINGLES
"Wonder Cote" Finished
in Nine Attractive Colors
Detailed Specifications Furnished on Request
SIDEWALL LUMBER CO.
1994 Oakdale Ave. San Francisco 24 ATwater 2-8112

CLINTON
CONSTRUCTION CO.
OF CALIFORNIA
General Contractors
923 FOLSOM STREET • SAN FRANCISCO
SUtter 1-3440

HOGAN LUMBER CO.
Wholesale and Retail
LUMBER
MILL WORK • SASH & DOORS
Office, Mill, Yard and Docks
SECOND AND ALICE STREETS • OAKLAND, CALIF.
Telephone GLencourt 1-6861

Trent R. Dames

(From Page 33)

of the stratification may be justified.

Whether the borings be few or many, 20 feet or 200 feet in depth, it is well to emphasize that they are drilled for the sole purpose of securing information. Too frequently they are entrusted to unqualified personnel—in which case they represent money poured down a rat hole. During the last war something over $100,000 was spent for a series of borings at the Hunters' Point Naval Dry Docks which were drilled under such circumstances. All of the alleged data obtained proved worthless and unusable. Innumerable less spectacular examples, including private as well as public works, could be cited.

Securing worthwhile and accurate data from the exploration borings is the most difficult part of any foundation investigation and, unless these data are valid, all subsequent work is worthless. Dames & Moore believe that they have an exceptionally well-trained and able group of field engineers—some of these men have been continuously with us for nearly ten years. In spite of this fact, we find it necessary under the majority of conditions to provide each engineer with an assistant whose duty it is to relieve the engineer of all routine tasks so that the engineer may devote his entire attention to securing and recording the data being obtained as the result of the drilling and sampling operations.

The soils engineer can obtain samples of any soil, at any necessary depth, sufficiently undisturbed to permit valid and reasonably accurate determinations of the physical properties previously outlined in this address. While it is the current opinion of many that it is impossible to secure undisturbed samples of sand from below the water table, proper sampling equipment in the hands of trained personnel has enabled the securing of such samples for the past ten years.

From the standpoint of soil disturbance, the walls of the sampling device should be as thin as practical considerations will allow. Eastern college professors have repeatedly expressed themselves in the literature to the effect that samples taken with other than so-called "thin-walled" samplers—samplers having wall thicknesses of less than 1/16-inch—were worthless. It is time that these ill-considered and misleading opinions were withdrawn or corrected.

No soil containing any gravel can be sampled with a thin-walled sampler because striking a gravel particle collapses the sampler. Accordingly, western operations require a sampler of appreciable wall thickness to give the requisite structural strength. In addition, the thin-walled sampler

(See Page 38)

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

MONETARY MANAGEMENT. By Dr. E. A. Goldenweiser. McGraw-Hill Book Co. Price $2.75

This research report by Dr. Goldenweiser of the Institute for Advanced Study, Princeton, New Jersey, is the twelfth in a series of studies authorized by the Committee for Economic Development Research and Policy Committee as part of its effort to provide competent, objective analysis and information on policies by government and business that will make for sustained high level production and employment.

THE MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION. The Associated General Contractors of America, Washington, D. C. Price $3.00.

Third revised edition contains 264 pages and approximately 100 photographs and drawings. Dedicated to superintendents and foremen who must assume responsibility of leadership in the prevention of accidents by a practical and common sense approach to the subject of accident prevention, which would result in a saving to the industry of some $293,750,000 annually.

LARGE SCALE HOUSING IN NEW YORK. New York Chapter, American Institute of Architects. Price $2.50.

The Committee on Housing for the New York Chapter of the American Institute of Architects has prepared and published a summary of the Significance of the Work of the New York City Housing Authority.

The book covers seven major divisions of operation from a general consideration of the subject to cooperation with governmental agencies. Many illustrations are used, as are drawings, plots and maps.

NEW CATALOGUES AVAILABLE

Any of the catalogues or folders described here may be obtained by forwarding your request as indicated in the coupon below to the office of the ARCHITECT & ENGINEER. *Merely mark the items you want and clip or paste the coupon to your letterhead.*

130. FORCED AIR GAS FURNACES: A new catalog by the Henderson Furnace and Mfg. Co. which pictures the manufacture of gas forced air furnaces in a modern plant from first shearing of metal to final testing and shipment. Each part and function of the furnace is well illustrated with attention to the specially designed blower. A.I.A. 30-F-1, 12 pages illus. 8/49.

131. SMOOTH CEILINGS SYSTEMS: New 8 page bulletin shows Smooth Ceiling Systems used in numerous types of buildings. This system employs a special teel grillage that eliminates flared column capitals, drop panels, and beams, which greatly reduces construction costs. In addition to showing various types of buildings in which Smooth Ceiling Systems may be used, the bulletin also shows test slabs with the results of various test loads. 8 pages illus.

132. VENT FLUE CAPS: A catalog covering the improvements in roof ventilators and chimney tops accomplished by the Breidert Air-X-Hauster. The booklet covers ventilation problems in vent flue defects and chimney draft problems. 8 pages illus. 11/49.

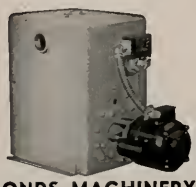
ARCHITECT AND ENGINEER,
68 Post Street, San Francisco, Calif.

I would like to have a copy of each of the New Catalogues I have circled.

130 131 132

Please send to the address on my letterhead, or as I have indicated, and to my attention. (Please print your name—no literature will be sent on this coupon after (January 15th.—A. & E.)

PACIFIC MANUFACTURING CO.
High Class Interior Finish Quality Millwork
16 Beale St., San Francisco GArfield 1-7755
2215 El Camino Real, San Mateo S. M. 5-0687
304 Bryant Street, Palo Alto P. A. 3373
2610 The Alameda, Santa Clara S. C. 607 (Factory)
6820 McKinley Avenue, Los Angeles THornwall 4196
MAIN OFFICE — SANTA CLARA

"AMERICAN - MARSH"
CONDENSATION UNIT
Pumping Machinery for Every Purpose

For Service Call DOuglas 2-6794 or MUtual 8322
SIMONDS MACHINERY CO.
SAN FRANCISCO 816 FOLSOM
LOS ANGELES 455 EAST 4TH

VERMONT MARBLE COMPANY
Producers and Finishers of
Domestic and Imported Marbles
525 MARKET STREET, SAN FRANCISCO Phone SUtter 1-6747
3522 COUNCIL STREET, LOS ANGELES Phone DUnkirk 2-7834
GOOD FOR ALL TIME VERMONT MARBLE

The Most Complete Line of
STEELS and BUILDING MATERIALS
Made by a Single Producer
REPUBLIC STEEL
See Sweet's Catalog File or write us for full information.
REPUBLIC STEEL CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO
DENVER, COLORADO . . . CONTINENTAL OIL BUILDING
LOS ANGELES, CALIFORNIA . . . . . EDISON BUILDING
SALT LAKE CITY, UTAH . . . . . WALKER BANK BUILDING
SAN FRANCISCO, CALIFORNIA . . . . RIALTO BUILDING
SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

Trent R. Dames

(From Page 36)

is incapable of obtaining samples of soils of low cohesion below the water table; Sample retaining devices must be introduced which require an appreciable wall thickness in the sampler.

Under the criticism of our eastern friends we have experimented with thin-walled and thick-walled samplers in our western soils and could find no measurable difference in the quality of the samples obtained. Our eastern friends have then insisted that our western soils must be different than their eastern soils. The speaker is now glad to report that we have recently been able to experiment with the quality of samples obtained with both types of samplers during the course of investigations for a large refinery in New Jersey. Accordingly, in our opinion, it is a reasonably safe conclusion that the present state of the art permits the obtaining of sufficiently undisturbed samples of all soils.

Having accurate information on the distribution and extent of the significant subsurface conditions, and sufficient representative undisturbed samples to describe the many variations which inevitably accur in even a single deposit of soil having similar textural characteristics, the foundation engineer can proceed to determine the moisture content, density, shearing strength, frictional value, compressibility, expansive characteristics, and permeability, or those of these properties which have a bearing on the questions he is asked to answer.

From the shearing strength of the soil, the soils engineer is able to make quite accurate—usually within 15 percent—determination of the maximum pressures which may be imposed by foundations without causing plastic flow of overload soil from beneath the foundations. He can compute the capacity of drilled cast-in-place concrete piling, and of any other types of foundations which depend for their support on skin friction between the soil and the concrete poured in contact with it. He can determine the stability of earth embankments and dams, and of cut or dredged banks and slopes—frequently within 5 percent. Also, he can pre-determine the effect of probable future variations in water level, of moisture content, and of changes in grade, on any of the above.

If determinations of the frictional value of the soils on piling materials are combined with a knowledge of the shearing strength, the soils engineer is able to compute the static supporting capacity of piling to within an accuracy of 20 percent, and this can be done for comparative types before any piling are driven on the proposed site. This compares with errors of more than 500 percent which are all too common with the best of dynamic pile driving formulae. From frictional determinations combined with a knowledge of the shearing strength, the soils engineer can also estimate the pressures on and stability of retaining walls, bulkheads, and quay walls. The effect of probable future variations in conditions can be analyzed.

Assuming that the foundations are designed so as to avoid imposing stresses capable of causing plastic flow and failure in the soil, the structural engineer may be vitally interested in both the total and the relative movements of the various foundation components supporting his structure as the loaded soil deforms upon the imposition of load. With the aid of determinations of soil compressibility, the application of the Boussinesq theory or the recent Westergaard variations therein, the soils engineer can compute the eventual settlements to be expected, whether a spread footing, mat, or pile foundation be employed. Tendencies to diferential settlement result in a redistribution of load through the super-structure and, accordingly, the soils engineer must have the help and cooperation of the structural engineer if his calculations are to be meaningful. Unfortunately, a high order of accuracy is not practical at present, due, in the speaker's opinion, to deficiencies in the theory and to difficulties in its application. An expected error of as much as 50 percent must be anticipated in many cases, and a 25 percent error is frequent.

Soils deform slowly under load, as the process requires the escape of air and water as well as rearrangement of the particles. Settlement is rapid at first, but decreases with time. Means are available to compute the shape of the time-settlement curve for any foundation under any assumed sequence of loading or unloading of the foundation and of the adjacent areas. Unfortunately, experimental and theoretical difficulties limit the accuracy obtained to between 50 and 100 percent during the early phases of the application of load. The accuracy improves with the passage of time until the 25-to-50 percent error to be expected in the computation of ultimate settlement, is approached.

(See Page 41)

FORDERER CORNICE WORKS

Manufacturers of

Hollow Metal Products • Interior Metal Trim
Elevator Fronts and Cabs
Metal Plaster Accessories • Sanitary Metal Base
Flat and Roll Metal Screens
Metal Cabinets • Commercial Refrigerators

269 POTRERO AVE.

SAN FRANCISCO, CALIF. **HEMLOCK 4100**

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be addad in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—

Common Brick—Per 1M laid—$100.00 up (according to class of work).

Face Brick—Per 1M laid—$200.00 and up (according to class of work).

Brick Steps—$3.00 and up.

Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—according to class of work).

Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).

Common Brick—$33.00 per M—truckload lots, delivered.

Face Brick—$50.00 to $90.00 per M, truckload lots, delivered.

Fire Brick—Per M—$90.00 to $125.00.

Cartage—Approx. $9.00 per M.

Paving—$75.00.

BUILDING PAPER & FELTS

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard, 500 ft. roll	8.00
Sisalkraft, reinforced, 500 ft. roll	7.00
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.20
30-lb. roll	2.93
Campcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$3.13
Deadening felt, 1-lb.	3.69
Asphalt roofing, 15 lbs.	2.20
Asphalt roofing, 30 lbs.	2.93
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$1.75
Medium	2.04
Heavy	2.40
Extra Heavy	2.77

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.80 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.00 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	$4.75
Nails, per keg, base	$10.55
8-in. spikes	10.55
Rim Knob lock sets	1.80
Butts, dull brass plated on steel, 3½x3½	.73

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks), carload lots, $3.38 per bbl. f.o.b. car; delivered $3.60.

Per Sack, small quantity (paper) $1.00

Carload lots, in bulk per bbl. 2.78

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White: 1 to 100 sacks, $3.13 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

1-2-4 mix, to 10 yards*	$11.75
10 to 100 yards*	10.75
Over 100 yards*	10.25

* Delivered to site.

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$.16	$.16
6x8x16-inches, each	.21	.21
8x8x16-inches, each	.25	.25
12x8x16-inches, each	.33	
12x8x24-inches, each	....	.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$6.50
⅜-inch to ⅛-inch, per cu. yd.	6.50
⅛-inch to 0-inch, per cu. yd.	7.00

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing. 50c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet. (Available only for priority work.)

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $8000.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard.

Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Composition Floors, such as Magnasite, 50c per square foot.

Linoflor—2 gages—$3.00 per sq. yd.

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—available to Army and Navy only—⅛"—$3.50 sq. yd. 3/16"—$3.50 sq. yd.

Terazzo Floors—$1.50 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Standard Mill grades not available.

Victory Oak—T & G

⅜ x 2¼"	$252.00 per M. plus Cartage
½ x 2"	$210.00
½" x 1½"	200.00

Prefinished Standard & Better Oak Flooring

⅜ x 3¼"	$265.00 per M. plus Cartage
½ x 2½"	237.00 per M. plus Cartage

Maple Flooring

⅜" T & G Clear	$330.00 per M. plus Ctg.
2nd	305.00 per M. plus Ctg.
3rd	255.00 per M. plus Ctg.

Floor Layers' Wage, $2.28½ per hr. (Legal as of July 1, 1947. Given us by Inlaid Floor Co.)

GLASS—

Single Strength Window Glass	$ .25 per □ ft.
Double Strength Window Glass	.35 per □ ft.
Plate Glass, under 75 sq. ft.	2.00 per □ ft.
¼ in. Polished Wire Plate Glass	1.00 per □ ft.
¼ in. Rgh. Wire Glass	.58 per □ ft.
Obscure Glass	.45 per □ ft.

Glazing of above is additional.

Glass Blocks $2.75 per □ ft. set in place

HEATING—

Average, $2.50 to $3.00 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $64 per register.

Forced air average $91 per register.

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2")..... $45.00 per M sq. ft.
Cotton Insulation—Full-thickness
(3⅝")..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $23.50 per M sq. ft.
Tileboard—4'x8' panel..... $9.00 per panel
Wallboard—½" thickness..... $55.00 per M sq. ft.
Finished Plank..... $69.00 per M sq. ft.
Ceiling Tileboard..... $69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron. etc., depends on designs.

LUMBER—

No. 1 Common..... $85.00 per M
No. 2 Common..... 83.00 per M
Select O. P. Common..... 90.00 per M

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 6 to 24 ft.	185.00
"B" grade, medium dry	150.00

Plywood..... 18c to 20c per ft.
Plyscord..... 11½c per ft.
Plywall..... 9c per ft.
Plyform..... 15c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square..... $15.25
¾" to 1¼" x 24/26 in split resawn, per square..... 17.00
Average cost to lay shakes,— 8.00 per square

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.44, Copper Bearing, per carloads, per 100 sq. yds..... $35.50
Standard Ribbed, ditto..... 37.70

MILLWORK—Standard.

D. F. $150 per 1000. R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 end up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases for kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20.00 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work..... per yard 85c
Three-coat work..... per yard $1.10
Cold water painting..... per yard 25c
Whitewashing..... per yard 15c
Turpentine..... $1.85 per gal. in 5-gal. cont.
Raw Linseed Oil..... $3.33 per gal. in 5-gal. cont.
Boiled Linseed Oil..... $3.23 per gal. in drums.
Boiled Linseed Oil—$3.33 per gal. in 5-gal. containers.
Replacement Oil—$2.75 per gal. in drums. $2.75 per gal. in 5-gal. containers.
Use Replacement Oil..... $3.00 per gal. in 1 gal. cont.
A deposit of $7.50 required on all drums.

PATENT CHIMNEYS—

6-inch..... $2.50 lineal foot
8-inch..... 3.00 lineal foot
10-inch..... 4.00 lineal foot
12-inch..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hat rail channels metal lath (lathed only)	3.00
Seilings with ¾ hat rail channels metal lath plastered	4.50
Single partition ¾ channel lath 1 side (lath only	3.00
Single partition ¾ channel lath 2 inches thick plastered	8.00
4-inch double partition ¾ channel lath 2 sides (lath only)	5.75
4-inch double partition ¾ channel lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

Note—Channel lath controlled by limitation orders.

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed LLiLme—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yard (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply—$11.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $14.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Cedar in place, 4½ in. exposure, per square..... $18.25
5/2 No. 1 Ceder Shingles, 5 in. exposure, per square..... 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per squere.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square..... 23.00
Re-coat with Grevel $5.50 per sq.
Asbestos Shingles $35 to $45 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure..... $24.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure..... $29.00
1 x 25" Resawn Cedar Shakes, 10" Exposure..... 22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton..... $99.50
Vitrified, per foot:
Standard, 8-in..... $ .62
Standard, 12-in..... 1.09
Standard, 24-in..... 4.72
Clay Drain Pipe, per 1,000 L.F. in carload lots:
Standard, 6-in..... $211.00
Standard, 8-in..... 352.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Copper, $1.25 sq. ft. (flat).
Galvanized iron, 65c sq. ft. (flat).
Vented hip skylights, $1.50 sq. ft.

STEEL—STRUCTURAL—

$220 per ton erected, when out of mill.
$270 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd..... $7.15
⅜-in. Rd..... 6.40
½-in. Rd..... 6.20
⅝-in. Rd..... 6.05
¾-in. & ⅞-in. Rd..... 6.00
1-in. & up..... 5.95

STORE FRONTS (None available).

TILE—

Ceramic Tile Floors—Commercial $1.15 to $1.50.
Cove Base—$1.35 per lin. ft.
Tile Wainscot & Floors—Residential $1.50 to $1.75.
Tile Wainscot—Commercial $1.35 to $1.50.
Asphalt Tile Floor ⅛" x ⅞"—$ .40 per sq. ft. Light shades slightly higher.
Cork Tile—$1.00 per sq. ft.
Mosaic Floors—See dealers.
Lino-Tile—$1.00 per sq. ft.

Wall Tile—
Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.25 sq. ft.
4 x 6 x 12	1.50 sq. ft.
2 x 8 x 16	1.45 sq. ft.
4 x 8 x 16	1.75 sq. ft.

Building Tile—
8x5½x12-inches, per M..... $139.50
6x5½x12-inches, per M..... 105.00
4x5½x12-inches, per M..... 84.00

Hollow Tile—
12x12x3-inches, per M..... $124.00
12x12x4-inches, per M..... 139.50
12x12x0-inches, per M..... 176.00

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—

60c per square foot, $5 for ventilators.

Trent R. Dames

(From Page 38)

By combining the results of both shear and consolidation tests, and devising appropriate theory, the time-rates of settlements and differential settlements resulting from the loading of soils into the plastic range can be estimated. Oil storage tanks are examples of structures which, because of economic considerations, must frequently impose loads in excess of the yield point of the soil. While plastic flow is taking place, compressive settlements due to consolidation are also occurring and have the effect of increasing the shearing strength of the soil. If the soil is not too far overstressed by the imposed load, a point is eventually reached at which the shearing strength has increased sufficiently to arrest the plastic flow and stability results. To date we do not have sufficient field records to support an opinion as to the probable error to be expected in this analysis. The factors mentioned in the foregoing are believed to largely account for many of the cases wherein an undamaged existing structure purportedly loads the soils more heavily than a soils mechanics investigation would indicate to be prudent. Plastic flow of overload soil occurs, but the wide factor of safety in the superstructure, perhaps provided for maximum earthquakes that have never occurred, permits redistribution of load to such non-foundation elements as spandrel walls and floor slabs until the effects of consolidation with time increase the shearing strength and stability results!

Many other applications of soil mechanics are possible as, for example, determinations of the expansive forces which adobe soils may exert on structures, the rates of flow of water into excavations, the support offered by subgrades to pavements, and the properties of compacted fills. Time does not permit their discussion, nor presentation of slides.

LONG DISTANCE COMMUTER

University of Cincinnati officials are wondering if some sort of a long distance commute record is not being set by Cliff Donley of San Bruno, California, who is a student in the Cincinnati College of Business Administration will commute the 2,449 miles between classes and his home near San Francsico every seven weeks.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation baing paid and in affect by employers by agreament betwaen employees and their union; or as recognized and determined by the U. S. Department of Labor. (Revised to Sept. 1, 1949.)

CRAFT	San Francisco	Alameda	Contre Costa	Fresno	Sacramento	Santa Clare	Solano	Stockton	Los Angeles	San Bar-nardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.16	$2.25	$2.25	$2.25	$2.25	$2.25
BRICKLAYERS	3.00*	3.00	3.00	2.50	3.00	3.00	3.00	2.05*	2.265	2.50	2.50	2.625	2.50
BRICKLAYERS, HODCARRIERS	2.25	2.25	2.25	2.00	2.00	1.75	2.25	1.60*	1.75	1.75	1.75	1.75	1.75
CARPENTERS	2.16	2.16	2.175	2.175	2.175	2.175	2.175	2.175	2.12	2.12	2.12	2.12	2.12
CEMENT FINISHERS	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
ELECTRICIANS	2.50	2.50	2.50	2.25	2.50	2.50	2.40	2.40	2.40	2.40	2.375	2.40	2.15
ELEVATOR CONSTRUCTORS	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	1.9875	1.9875	1.9875	1.9875	1.9875
PILE DRIVER	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.32	2.32	2.32	2.32	2.32
STRUCTURAL STEEL	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.30	2.30	2.2375	2.30	2.30
GLAZIERS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.96
IRONWORKERS: ORNAMENTAL	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.175	2.175	2.1125	2.175	2.175
REINF. RODMEN	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.20	2.20	2.20	2.20	2.20
STRUCTURAL	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.30	2.30	2.2375	2.30	2.30
LABORERS: BUILDING	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
CONCRETE	1.55	1.55	1.55	1.45	1.55	1.45	1.55	1.55	1.57	1.57	1.57	1.57	1.57
LATHERS	2.8125	2.8125	2.8125	2.8125	2.00*	2.50*	2.8125	2.8125	2.50	2.50	2.50	2.50	2.50
MARBLE SETTERS	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.375	2.25	2.25	2.25	2.25	2.25
MOSAIC & TERRAZZO	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.40	2.40	2.20	2.40	2.40
PAINTERS	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.15**	2.00	1.90	2.10	2.18	2.25
PILEDRIVERS	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
PLASTERERS	2.8125	2.50*	2.50*	2.25*	2.25*	2.50*	2.50*	2.8125	2.50	2.75	2.50	2.50	2.50
PLASTERERS, HODCARRIERS	2.50	2.75*	2.25*	1.775*	2.00*	2.00*	2.25*	2.16	2.15	2.25	2.30	2.00	2.00
PLUMBERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
ROOFERS	2.25	2.25	2.25	1.875	2.00	2.00	2.16	2.25	2.25	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.25	2.25	2.25	2.125	2.30	2.40	2.125	2.125	2.15	2.15	2.175	2.00	2.15
SPRINKLER FITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
STONESETTERS (MASONS)	3.00	2.8125	2.8125	2.25*	2.8125	2.8125	2.8125	2.05*	1.50	1.50	1.50	2.625	1.715
TILESETTERS	2.675	2.675	2.675	2.15	2.00	2.675	2.675	2.4375	2.50	2.50	2.20	2.50	2.25

* 6 Hour Day. ** 7 Hour Day.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

CLASSIFIED ADVERTISING

RATE: 20c PER WORD . . . CASH WITH ORDER — MINIMUM $5.00

WANTED: Engineer, preferably graduate mechanical with 10 years in gypsum industry with executive experiences. In answering state salaries received and expected, as well as experiences. Box 100, Architect and Engineer, 68 Post St., San Francisco, Calif.

GET THE BEST, don't be satisfied with anything but the best. Window sash, Doors, Cabinets, etc. Town Talk Sash & Door Mill, 524 9th St., Sacramento.

WANTED! A market for the complete output of a sizeable redwood shingle mill; Write Box W, Architect & Engineer, 68 Post Street, San Francisco.

ADVERTISERS wishing to sell building materials and products, GET THE BEST RESULTS from regular advertising schedules in ARCHITECT & ENGINEER magazine. Write for complete information, including rates, circulation, etc., 68 Post Street, San Francisco.

FLOOR COVERINGS for industrial, commercial, and residential construction. Complete lines, one of the oldest, best established organizations in the Sacramento Valley. LATTIN'S, INC., 1519 Alhambra Blvd., Sacramento.

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

NEW BENJAMIN CORY GRAMMAR SCHOOL, San Jose, Santa Clara County: San Jose Board of Education, owner; 6 classrooms, 2 kindergartens, office & toilet rooms, $128,331. ARCHITECT: Birge M. Clark & Walter Stromquist, Palo Alto. Frame & stucco construction. GENERAL CONTRACTOR: Nielsen & Nielsen, San Jose.

HIGH SCHOOL ADDITION. Dinuba, Tulare County: Dinuba Joint Union High School District, owner; gynasium & locker buildings & swimming pool, $283,900. ARCHITECT: Fred L. Swartz & William Hyberg, Fresno. Reinforced concrete, structural steel & frame & stucco construction. GENERAL CONTRACTOR: Trewhitt, Shields & Fisher, Fresno.

RESIDENCE. Los Altos, Santa Clara County: Misses Hazel & Myrtle Wood, owners; $24,000. ARCHITECT: Wilton Smith, San Francisco. Frame & stucco construction. GENERAL CONTRACTOR: Ralph C. Knight, Los Altos.

EDISON HIGH SCHOOL ADDITION — STOCKTON. SAN JOAQUIN COUNTY: Stockton Board of Education—owner—classroom wing, 9 classrooms & offices, $296,549. ARCHITECT: J. Upton Clowdsley—Stockton—1 story, reinforced concrete & frame & stucco construction. GENERAL CONTRACTOR: Nomellini Construction Co. —Stockton.

TWO MEMORIAL BUILDINGS—LINDSAY & STRATHMORE. FRESNO COUNTY — Lindsay-Strathmore Memorial Board—owner—$129,168. ARCHITECT: Chas H. Franklin—Fresno. GENERAL CONTRACTOR: Harris Construction Co.—Fresno.

DRIVE IN RESTAURANT—CONCORD. CONTRA COSTA COUNTY: M. A. Rotermund—owner—$26,963. ARCHITECT: Kirby & Mulvin—San Francisco—concrete block and frame; plate glass. GENERAL CONTRACTOR: L. R. Ilord—Martinez.

GRAMMAR SCHOOL ADDITION—EXETER. TULARE COUNTY: Exeter Union Elementary School District—owner—2 classrooms & offices, $53,299. ARCHITECT: Wm. D. Coates & Maurice J. Metz—Fresno—frame & stucco construction. GENERAL CONTRACTOR: Oppenheim & King—Fresno.

RESIDENCE—PIEDMONT, ALAMEDA COUNTY: Mr. Grodin — owner — $35,000. ARCHITECT: Irwin M. Johnson—Oakland—frame & stucco construction. GENERAL CONTRACTOR: Carlson & Maier — Oakland.

WAREHOUSE ADDITION & REMODEL — SAN FRANCISCO: A. S. Berwick—owner—$12,000. ARCHITECT: Bliss, Burt, Trudell & Berger—San Francisco—reinforced concrete construction & interior & exterior remodel. GENERAL CONTRACTOR: Alfred P. Fisher—San Francisco.

CHEVROLET AUTO SALES & SERVICE BUILDING REMODEL — TULARE. TULARE COUNTY: A. H. Schultz—owner—$48,553. ARCHITECT: Robert C. Kaestner—Visalia —interior & exterior remodel. GENERAL CONTRACTOR: Midstate Construction Co. —Fresno.

AMERICAN LEGION BUILDING—SALINAS. MONTEREY COUNTY: American Legion Post No. 31—owner—$33,960. ARCHITECT: Chas. E. Butner—Salinas—frame & stucco. GENERAL CONTRACTOR: Alex F. Carlson —Salinas.

MEDICAL BUILDING — SAN FRANCISCO: Shaw-Thelander—owner—3 suites of offices & apartments, $29,647. ARCHITECT: Francis E. Lloyd—San Francisco—1 & 2 story, 1800 sq. ft.; frame & stucco, some brick walls, concrete floors, asphalt tile floors. GENERAL CONTRACTOR: A. F. Mattock Co.—San Francisco.

GRAMMAR SCHOOL ADDITION—EDISON. KERN COUNTY: Edison Elementary School District—owner—classroom & kindergarten, $44,743. ARCHITECT: Ernest L. McCoy—Bakersfield—frame & stucco construction. GENERAL CONTRACTOR: Willard Michael —Bakersfield.

JUNIOR HIGH SCHOOL ADDITION—SANTA ROSA. SONOMA COUNTY: Santa Rosa Board of Education—owner—science wing, domestic science unit, woodworking & metal shops, remodel auditorium into cafeteria & library, kitchen addition, alterations to existing building, $398,000. ARCHITECT: J. Clarence Felciano—Santa Rosa.

NEW RANCHO GRAMMAR SCHOOL, San Pablo, Contra Costa County: San Pablo Elementary School District, owner; 8 classrooms, kindergarten, office & toilet rooms. ARCHITECT: Dragon, Schmidts & Hardman, Berkeley. Frame & stucco construction. GENERAL CONTRACTOR: Marvin E. Collins, El Cerrito.

CLINIC BUILDING. San Mateo, San Mateo County: San Mateo Clinic, owner; $254,443. ARCHITECT: Wm. Simrell, Jr. & Kingsford Jones, Palo Alto. 2 story building, light steel frame & frame & stucco construction, 20,000 sq. ft. GENERAL CONTRACTOR: Howard J. White, Inc., Palo Alto.

FACTORY BUILDING. Oakland, Alameda County: S. A. Russo, owner; $26,500. ARCHITECT: Edward D. Cerruti, Oakland. 1 story, 60 x 108, shed 24 x 108, reinforced concrete, wood roof trusses. GENERAL CONTRACTOR: M. Drinkward, Oakland.

LIBRARY BUILDING. Alma, Santa Clara County: Alma College, owner; $100,000. ARCHITECT: Paul A. Ryan & John M. Lee, San Francisco. 2 story, reinforced concrete construction. GENERAL CONTRACTOR: Robert McCarthy Co., San Francisco.

NEW WASHINGTON GRAMMAR SCHOOL, Sanger, Fresno County: Sanger Elementary School District, owner; 8 classrooms, offices & toilet rooms, $141,625. ARCHITECT: Swartz & Hyberg, Fresno. Frame & stucco construction. GENERAL CONTRACTOR: Atkinson Construction Co., Fresno.

STORE & RESIDENCE. Sacramento, Sacramento County: H. Hansen, owner; $21,446. ARCHITECT: Leonard F. Starks, Sacramento. 2 story, frame & stucco construction. GENERAL CONTRACTOR: United Construction Co., Sacramento.

3 FIELD HOUSES. Sacramento, Tahoe, Colonial, & East Portal Parks, Sacramento County: City of Sacramento, owner; $22,714. ARCHITECT: Barovetto & Thomas, Sacramento. 1 story, brick & frame construction. GENERAL CONTRACTOR: Chas. Guth, Sacramento.

APARTMENT BUILDING, San Mateo, San Mateo County: Harvey G. Brackett, owner; 12 apartments, $78,377. ARCHITECT: Wallace A. Stephen, Burlingame. 2 story, basement garage, frame & stucco. GENERAL CONTRACTOR: Harris & Fieldheim, Menlo Park.

ELKS CLUB BUILDING, Modesto, Stanislaus County: Elks Hall Assoc., owner; $49,353. ARCHITECT: G. N. Hilburn, Modesto. 1 story, reinforced concrete & frame construction. GENERAL CONTRACTOR: A. R. Bacon, Modesto.

FACTORY BUILDING. Daly City, San Mateo County: Chris F. Stegman, owner; $25,000. ARCHITECT: Geo. W. Chambers, Palo Alto; CONSULTING ENGINEER: Chas. L. Colburn, San Jose. 1 story, concrete block construction. GENERAL CONTRACTOR: Commercial Construction Co., Daly City.

PRESS BUILDING, San Jose, Santa Clara County: Hayes Company, owner; $84,350. ARCHITECT: Ralph Wyckoff, San Jose. 2 story, 61 x 132, reinforced concrete & structural steel construction. GENERAL CONTRACTOR: O. E. Anderson, San Jose.

MUSICIANS UNION BUILDING. Sacramento, Sacramento County: Musicians Union, owner; $34,120. ARCHITECT: Wallace J. Alexander, Fresno. 2 story, 40 x 80, concrete block & frame construction. GENERAL CONTRACTOR: Erickson Construction Co., North Sacramento.

RESIDENCE. San Francisco: Mr. & Mrs. Leon B. Russell, owner; $140,000. ARCHITECT: Eric Mendelsohn, San Francisco. 3 story, frame & stucco construction. GENERAL CONTRACTOR: Jacks & Irvine, San Francisco.

DEL MAR GRAMMAR SCHOOL ADDITION, Fresno, Fresno County: Fresno Board of Education, owner; Classrooms, storeroom & toilet rooms. ARCHITECT: Franklin & Simpson, Fresno. Frame & stucco construction. GENERAL CONTRACTOR: L. H. Hansen & Sons, Fresno.

SAN JOSE. Santa Clara County: Store building; Frank Ahzalone, owner; $12,160. ARCHITECT. Donnell E. Jaekle, San Jose; 1 story, reinforced concrete and frame and stucco and steel sash, composition roof, plate glass front. GENERAL CONTRACTOR: Earl W. Heple, San Jose.

HILLSBOROUGH, San Mateo County: Residence, John W. Ford, owner, $29,974. ARCHITECT: Clarence W. Mayhew, frame and stucco construction. GENERAL CONTRACTOR: C. H. Bessett, Burlingame.

SALINAS. Monterey County: Firehouse building. Salinas Rural Monterey County Fire Protection District, owner, $99,870. ARCHITECT: Wm. H. Rowe, San Francisco; 1 and 2 story, reinforced concrete construction and structural steel. GENERAL CONTRACTOR: Leonard English, Santa Cruz.

SAN FRANCISCO: Office building addition. Soule Steel Co., owner, $73,290. ARCHITECT: Weihe & Kruse, San Francisco. 2 story, reinforced concrete and frame and stucco construction. GENERAL CONTRACTOR: Jacks & Irvine, San Francisco.

MADERA, Madera County: Sludge treatment plant, City of Madera, owner, $128,750. ENGINEER: Francis H. Bulot, Los Angeles. GENERAL CONTRACTOR: Rolandi & Sutton, San Francisco.

PANACALITE

The Standard for Perlite Aggregates
An Engineered Product — Engineering Service
Air Classified — Sized & Graded for Plaster, Concrete & Stucco Aggregates

Chemical, Insulation & Filter Aid Grades
A. S. T. M. Fire rating—2 hours
N. B. F. U. Accepted

a product of
Combined Metals Reduction Co.

Manufactured by
American Perlite Corporation
26th & B Sts.—Yard 2—Richmond
Richmond 4307

HOLLISTER. San Benito County: Grandstand. County of San Benito, owner, $176,880. ARCHITECT: Raymond R. Franceschi, Sacramento. Reinforced concrete construction; structural steel and corrugated steel roof. GENERAL CONTRACTOR: Geo. C. Renz, Gilroy.

CORNING. Tehama County: Grammar schools addition. Corning Elementary School District, owner. Classrooms and toilet rooms. $105,885. ARCHITECT: Chas F. Dean, Sacramento. Frame and stucco construction. GENERAL CONTRACTOR: C. H. Smythe, Lakeport.

SAN MATEO. San Mateo County: Doctors office building. Dr. Matirn Karr, owner. $15,000. ARCHITECT: E. Jay Miller, San Mateo. Frame and stucco construction. GENERAL CONTRACTOR: Arthur Bros., San Mateo.

SAN FRANCISCO: Residence. Mr. Anixter, owner. $63,500. ARCHITECT: Wurster, Bernardi & Emmons, San Francisco. 2 story, frame and stucco construction. GENERAL CONTRACTOR: Mattock Construction Co., San Francisco.

WOODBRIDGE. San Joaquin County: Grammar school addition. Woodbridge Elementary School District, owner. 1 classroom, $9,992. ARCHITECT: Harry J. Devine, Sacramento. Frame and stucco construction. GENERAL CONTRACTOR: Wisner & Miller, Lodi.

OAKLAND. Alameda County: Barracks building, Corps of Engineers, U. S. Army, owner. 225 enlisted men, $398,977. GENERAL CONTRACTOR: Parker, Steffens & Pearce, San Francisco. Barracks building, water, sewers and electric services, cast in place piles.

OAKLAND. Alameda County: Fruitvale elementary school building. Oakland Board of Education, owner. 16 classrooms, offices, auditorium and toilet rooms, $497,700. ARCHITECT: Ponsford & Price, Oakland. 2 story, reinforced concrete, composition roof. GENERAL CONTRACTOR: John E. Branagh & Son, Piedmont.

SAN FRANCISCO: Market building. J. Baladochi, owner. $96,000. ARCHITECT: H. C. Baumann, San Francisco. 1 story, 100x125, frame and stucco construction, stainless, plate glass, terrazzo and asphalt tile floors, wood roof trusses. GENERAL CONTRACTOR: H. P. Zinkand, San Francisco.

EASTON. Fresno County: Grammar school. Washington Colony Elementary School District, owner. 3 classrooms, toilet rooms, well and pump. $31,547. ARCHITECT: H. Rafael Lake & Elso B. DiLuck, Fresno. Frame and stucco construction. GENERAL CONTRACTOR: L. H. Hansen & Sons, Fresno.

ROSEVILLE. Placer County: Veterans memorial building addition. County of Placer, owner. $57,887. ARCHITECT: Raymond Franceschi, Sacramento. Frame and brick veneer. GENERAL CONTRACTOR: Arthur Odman, Fair Oaks.

WOODLAKE. Tulare County: High school addition. Woodlake Union High School District, owner. Classroom wing and agriculture and woodworking shop building, $102,949. ARCHITECT: David Horn & Marshall Mortland, Fresno. GENERAL CONTRACTOR: Oppenheim & King, Fresno.

MILLBRAE. San Mateo County: Greenhills School addition and Taylor School addition. Millbrae Elementary School District, owner. 5 classrooms and 3 classrooms, $106,534. ARCHITECT: John Lyon Reid, San Francisco. Reinforced concrete, structural steel and frame and stucco construction. GENERAL CONTRACTOR: Jos. Bettancourt, San Bruno.

SAN FRANCISCO: 12 apartment buildings. Kirkham Heights Apartments, owner. 90 apartments. ARCHITECT: Angus McSweeney, San Francisco. 2 and 3 story frame and stucco construction. GENERAL CONTRACTOR: Williams & Burrows, Burlingame.

BERKELEY. Alameda County: Club and students cultural center. I. M. Golden Memorial Hillel Foundation, owner. $96,900. ARCHITECT: Michael Goodman, Berkeley. STRUCTURAL ENGINEER: Walter Steilberger, Berkeley. 2 story and basement, reinforced concrete and frame and stucco construction, gas and hot air heating; stucco interior, composition roof, asphalt tile floors. GENERAL CONTRACTOR: G. P. W. Jensen & Son, San Francisco.

WALNUT CREEK. Contra Costa County: Medical building. Highland Construction Co., owner. Doctors' offices, drug store, x-ray and laboratory, $150,000. ENGINEER: J. Y. Long Co., Oakland. 1 story and part basement, reinforced concrete, frame and stucco construction, tile roof.

LODI. San Joaquin County: Lodge building. Oddfellows Hall Ass'n., owner. $100,000. ARCHITECT: Elmore G. Ernst, Stockton. 2 story, reinforced concrete construction. GENERAL CONTRACTOR: Nomellini Construction Co., Stockton.

RICHMOND. Contra Costa County: Doctor's office building. Dr. E. R. Guinnan and Dr. L. A. Pedersen, owners. $35,433. DRAFTSMAN: Elvin A. Cometta, Richmond. 1 story, frame construction. GENERAL CONTRACTOR: Carl Overaa & Co., Richmond.

CONCORD. Contra Costa County: Sewage treatment plant. City of Concord, owner. $272,710. ENGINEER: John S. Bates, Berkeley. Pumping station, control buildings, flume sedimentation tanks. GENERAL CONTRACTOR: E. V. Lane Co., Palo Alto.

EMERYVILLE. Alameda County: Office building. Shell Development Co., owner. $390,000. 4 story, 33,500 sq. ft., reinforced concrete pile foundation. GENERAL CONTRACTOR: Christensen & Lyons, Oakland.

MARIPOSA. Mariposa County: New gymnasium building. Mariposa County High School District, owner. $74,625. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: R. W. Brown, Madera.

SAN FRANCISCO: 12 apartment buildings. Kirkham Heights Co., owner. 90 apartments. $566,500. ARCHITECT: Angus McSweeney, San Francisco. 2 and 3 story, frame and stucco construction. GENERAL CONTRACTOR: Williams & Burrows, Burlingame.

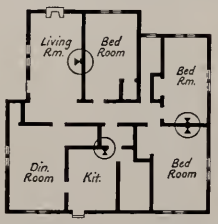
SACRAMENTO. Sacramento County: Cafeteria building. Sacramento Board of Education, owner. $162,700. ARCHITECT: Baravetto & Thomas, Sacramento. Reinforced concrete construction. GENERAL CONTRACTOR: Continental Construction Co.

OAKLAND. Alameda County: John Swett Grammar School. Oakland Board of Education, owner. 10 classrooms, offices and toilet rooms, add 4 classrooms to present building, $222,777. ARCHITECT: JOHN Hudspeth, Oakland. 1 story, frame and stucco construction. GENERAL CONTRACTOR: Harry K. Jensen, Oakland.

SAN FRANCISCO: Apartment building. Nello Giorgi, owner. $90,000. ENGINEER: C. Jefferson Sly, San Francisco. GENERAL CONTRACTOR: Crociani & Poili, San Francisco.

SACRAMENTO. Sacramento County: Church. Luther Memorial Church, owner. 1st unit, $58,880. ARCHITECT: Leonard F. Starks, Sacramento. Frame and stucco construction. GENERAL CONTRACTOR: Holdener Construction Co.

Blueprint for modern homes— Extra outlets, concealed wiring



Signs of a thoughtful builder are the convenient telephone outlets included in his blueprint. Here the customer may add new extensions in the kitchen and bedrooms later on as they are needed... inexpensively. These outlets also may be used for portable telephones.

Beautiful walls won't be marred by exposed wiring if built-in conduit is planned in advance. Low-cost, concealed wiring is easy to install, means extra customer appreciation. *For free help in planning, call your local Pacific Telephone office and ask for "Architects and Builders Service."*

Put built-in telephone facilities in your plans

The Pacific Telephone and Telegraph Company

IN THE NEWS

NEW LOCATION SELECTED FOR CALIFORNIA'S FAIR

The California Public Works Board has announced the purchase of 900 acres on the bank of the American River, near the "freeway" leading north from Sacramento, to be developed as the new site of the California State Fair.

More than $8,000,000 will be spent in construction of livestock and exhibit buildings, grandstand and other general utility buildings, according to Ned Green, secretary-manager of the fair.

Ample facilities will also be provided for parking of automobiles.

AIRPORT BONDS APPROVED

Among the many proposals submitted voters at the recent election for the issuance of bonds for construction purposes was a $10,000,000 plan for improvements to the San Francisco Municipal Airport.

San Francisco voters approved the project and work will start immediately on the construction of a $5,500,000 new Administration Building.

W. P. Day & Associates of San Francisca are the architects.

NEW HOSPITAL BONDS VOTED

Voters of the West Contra Costa County Hospital District in Richmond (California) recently approved the issuance of $2,000,000 in bonds for the purpose of constructing a new hospital of 100 beds.

D. D. Stone & Lou Mullay, San Francisco, are the architects.

LARGE SAN FRANCISCO STORE TO EXPAND

The Emporium Company of San Francisco will soon start construction of a new $10,000,000 addition to their present department store facilities.

The new building will be built between 4th and 5th streets on Mission Street, according to Hall & Pregnoff, structural engineers on the project, and will consist of a six story and basement, class A-1 building, 380' by 160'.

NEW CALIFORNIA NATIONAL GUARD ARMORY BUILDING

The State of California, Division of Architecture, has announced the allotment of $297,500 for the construction of a new National Guard Armory building at Fort Funston in San Francisco.

AWARDED PRIZE FOR BEST STEEL BRIDGE

The Airport Apron Overpass, over the Van Wyck Expressway at New York's International Airport has been awarded the American Institute of Steel Construction stainless steel plaque in Class III, for "America's most beautiful steel bridge" constructed during the year.

Designed by the firm of Clarke, Rapuano and Holleran, the structure is owned by the City of New York and was featured in the February 1949 issue of Architect & Engineer magazine, Page 9. Permission for reproduction of the illustration and article was subsequently granted by the magazine to the Concrete Association of India, Bombay, for reproduction in that association's magazine.

OPENS EASTERN OFFICES

J. F. Ray, vice president in charge of sales for the General Controls company of Glendale, California, has announced the opening of factory branch office facilities in Minneapolis, Buffalo and Baltimore.

The firm which manufactures automatic, pressure, temperature, level and flow controls now has factory branch offices in 21 major cities from coast to coast.

Named as managers of the new offices are: R. Roger Rosell, Jr., Minneapolis; Paul A. Palmgren, Buffalo, and Fred H. Angler, Baltimore.

SOULE' STEEL TO EXPAND OFFICES

In anticipation of further growth in its Pacific Coast business, the Soule' Steel Company has started construction to enlarge its general offices in San Francisco with an increase of nearly sixty per cent of present facilities, according to an announcement by Edw. L. Soule', president of the firm.

One of the larger western producers of fabricated steel building products, the company maintains branch offices in Los Angeles, Portland and Seattle.

VERNET NIELSEN DIES IN SEATTLE

Vernet Nielsen, well known Pacific Northwest industrialist and vice president and general sales manager of the Northern Division of Gladding McBean & Co., died early in November following a long illness.

Joining the firm in 1927, following graduation from the University of Washington where he majored in ceramic engineering, Nielsen rose from shipping clerk to vice president, and at the same time contributed liberally of his time for civic, fraternal, and allied business activities.

LARGE SAFE DEPOSIT VAULT GOES TO SEATTLE

One of the largest and safest bank vaults ever constructed is being installed in the new Seattle branch of the Federal Reserve Bank of San Francisco by the Soule' Steel Company of San Francisco in collaboration with the Seattle architectural firm of Naramore, Bain, Brady and Johanson.

Comprising five thousand square feet of floor space, distributed over two floors, the thick walls contain about four hundred tons of special heavy "steelcrete" mesh completely embedded in concrete of sufficient strength to withstand all explosive blasts, or even burning by oxyacetylene torch.

The structure is expected to be completed in November of 1950.

CHAMBER OF COMMERCE OPPOSES VA METHODS

The board of directors of the San Francisco Chamber of Commerce recently announced its opposition to the policy of the Veterans Administration by which "day labor, force account and purchase-and-hire" methods used on construction projects are used.

"A steadily increasing trend on the part of public agencies to perform their own construction work under this method may soon extend to every political level of government", declared Edward T. Haas, chairman of the organizations Sites and Buildings section.

ANNOUNCE PURCHASE OF PATENTS

The Northwest Tube & Metal Fabricators of Portland, Oregon, have announced the purchase of the patents, inventory and good will of the Armstrong Heat Control System from the Armstrong Control Co., Portland.

The system provides automatic regulation of temperatures in steam heated buildings and is based upon a 3-point thermostatic control method.

C. C. Cranston, Northwest Tube sales engineer, will direct sales and installations, according to an announcement by Harry L. Yager, president of the company.

NEW RANCHO MEADOWS HOTEL FOR SAN MATEO

The California Jockey Club, operators of the Bay Meadows Race Track at San Mateo, have announced the construction of a 1-story, reinforced concrete Hotel building and a 2-story administration building in San Mateo.

The buildings will contain 300 rooms and baths, 20 stores and a large swimming pool, and will be constructed at an estimated cost of $1,100,000, according to Wm. B. Kyne, general manager of the Jockey Club.

M. B. Ellery is the structural engineer, and M. I. Diggs the general contractor.

TEXAS STEEL PLANT ACQUIRED FROM U. S.

The Consolidated Western Steel Corp'n of Los Angeles has acquired certain surplus Government facilities at Orange, Texas, constructed by the Navy Department during World War II and operated as a wartime shipyard.

CRITICAL CLIENTS PREFER—

CABOT'S COLLOPAKES

32 Lively Colors — No Adulterants Are Used

CABOT'S patented COLLO PAKING process results in a durable, Porcelain-Smooth Surface—Stays Clean—Resists the elements for years.

Write for color card, showing 32 colors.

GUNN CARLE & CO

20 POTRERO AVENUE • SAN FRANCISCO, CALIF.

MULLEN MFG. COMPANY

—

BANK, STORE AND OFFICE FIXTURES—CABINET WORK OF GUARANTEED QUALITY CHURCH SEATING

—

Office and Factory
60-80 RAUSCH ST., Bet. 7th and 8th Sts.
San Francisco
Telephone UNderhill 1-5815

Thinking of Building?

From our cost records and experience, an advance estimate may be made from decidedly general information. Based on our knowledge of labor and material costs, gained on current jobs, such an estimate may be helpful in determining your construction program.

SWINERTON & WALBERG CO.
ALL TYPES CONSTRUCTION
SAN FRANCISCO • SACRAMENTO
OAKLAND • LOS ANGELES • DENVER

STATIONERY
SCHOOL & OFFICE
SUPPLIES
•
Printing Engraving
Announcements
•
CENTER STATIONERY
468 McAllister
San Francisco UN 1-3703

Fine
ENGRAVINGS
POOR RICHARD
PHOTO ENGRAVING CO.
320-324 COMMERCIAL STREET
SAN FRANCISCO 11

The property, formerly operated by Consolidated, was secured from the General Services Administration at Washington, D. C., according to Alden G. Roach, president of the corporation.

The plant will be used for the manufacture of welded and expanded steel pipe.

FAMILY DWELLINGS AT FORT ORD

The Sixth Army headquarters, through the Post Adjutant at Fort Ord (California), is taking bids for the construction and management of 500 multiple and single family dwellings at Fort Ord. Closing date is January 17th.

The project will be constructed on federal land and leased for a period of seventy-five years.

LOS ANGELES MAYOR APPROVES CLEARANCE

Mayor Fletcher Bowron has recommended to the City Council that Los Angeles enter into an agreement with the Housing Authority by which the Authority will take over management of the rental units of a two block area which will be cleared to house the new Police Administration Building and Health Center.

Bonds have been voted for the project and construction is expected to start in the early spring.

ELECTED PRESIDENT OF ELECTRICAL CONTRACTORS

Edward J. Vanderlinde of Rochester, New York, was elected president of the National Electrical Contractor's Association at their annual meeting in Houston, Texas, in November.

FRESNO STATE COLLEGE GETS BUILDING FUNDS

The State of California has alloted approximately $2,500,000 for the construction of several new buildings at Fresno State College, according to an announcement by the Division of Architecture.

Scheduled for construction in the immediate future is an Industrial Arts Building, additional Physical Education facilities, a science building, administration building and a teaching demonstration school.

STOCKTON STATE HOSPITAL TO BE EXPANDED SOON

Funds have been allocated by the State of California for the construction of a 450 bed Receiving and Treatment Hospital Building at the Stockton State Hospital, according to an announcement by the Department of Architecture.

Some $2,602,700 will be spent in the expanded building facilities.

FUNDS APPROVED FOR MEMORIAL HOSPITAL

The Salinas Valley Memorial Hospital District at Ronnie Lane, Monterey county, has announced the issuance of $2,000,000 in bonds for the construction of a new 133 bed Memorial Hospital.

The structure, to be of reinforced concrete, will be 105' by 592', according to Robert Stanton of Carmel, Architect for the project.

UNIVERSITY OF CALIFORNIA BUILDS CLASSROOMS

The University of California at Berkeley, has been alloted $3,282,000 in State of California funds for the construction of a new classroom building containing three stories.

Architects Weihe, Frick & Kruse of San Francisco have been selected for the work.

Scott Company
HEATING • PLUMBING
REFRIGERATION
★
San Francisco
Oakland
San Jose
Los Angeles

DINWIDDIE CONSTRUCTION COMPANY
•
BUILDERS
•
CROCKER BUILDING
SAN FRANCISCO

HERRICK IRON WORKS
STEEL
OAKLAND CALIFORNIA
HERRICK IRON WORKS
STRUCTURAL STEEL
REINFORCING STEEL
18TH AND CAMPBELL STS.
OAKLAND, CALIF.
Phone GLencourt 1-1767

Phone GArfield 1-1164
Thomas B. Hunter
DESIGNER OF HEATING
AIR CONDITIONING
VENTILATING AND WIRING
SYSTEMS, MECHANICAL
AND ELECTRICAL EQUIPMENT OF BUILDINGS
★
41 SUTTER STREET
ROOM 710
San Francisco California

PITTSBURGH TESTING LABORATORY

ENGINEERS AND CHEMISTS

Testing and Inspection of Concrete, Steel and Other Structural Materials

Design of Concrete Mixes

Offices in all principal cities

651 Howard St., San Francisco 5
EXbrook 2-1747

Mattock Construction Company

Builders

★

604 MISSION STREET
SAN FRANCISCO

STOLTE INC.

General Contractors

—:—

OAKLAND • CALIFORNIA

Subscribe Now —

ARCHITECT and ENGINEER

$3.00 Per Year

Index to Advertisers

AMERICAN Perlite Corpn. ... 42
ANGIER Pacific Corp. ... 46
ARCHITECTS Reports..Inside Back Cover

BAXTER & Company, P. H. ... 34
BURKE, W. J. & Co. ... *

CLARK, N. & Sons. ... *
CLASSIFIED Advertising ... 41
CENTER Stationary ... 45
CLINTON Construction Company ... 36
CONTINENTAL Water Heater Co. ... *

DETROIT Steel Products Co. ... 2
DINWIDDIE Construction Co. ... 45

FULLER, W. P. Co. ... *
FORDERER Cornice Works ... 38

GLADDING, McBean & Co. ... Inside Front Cover
GUNN, Carle & Company ... 44

HANKS, Inc., Abbott A. ... 46
HAWS Drinking Faucet Company ... 30
HENDERSON Furnace & Mfg. Co. ... *
HERRICK Iron Works ... 45
HOGAN Lumber Company ... 36
HUNT Robert W., Company ... 46
HUNTER, Thos. B. ... 45

JOHNSON, S. T. Co. ... *
JUDSON, Pacific-Murphy Corp. ... 31

KOPPERS Co. Inc. ... 5
KRAFTILE Company ... 28

MARBLE Institute of America ... *
MATTOCK, A. F. Co. ... 46
MICHEL & Pfeffer Iron Works ... *
MILLER Company, The ... *
MULLEN Mfg. Co. ... 45

NORTHERN California Electric Bureau ... 33

PACIFIC Clay Products Co. ... *
PACIFIC Coast Gas Association ... *
PACIFIC Manufacturing Company ... 37
PACIFIC Portland Cement Company ... Back Cover
PACIFIC Telephone & Telegraph Co. 43
PITTSBURGH Testing Laboratory ... 46
POOR Richard Engraving Co. ... 45

REMILLARD-Dandini Co. ... 46
REPUBLIC Steel Corporation ... 37

SCOTT Co. ... 45
SECURITY Valve Company ... *
SIDEWALL Lumber Co. ... 36
SIMONDS Machinery Company ... 37
SISALKRAFT Company ... 36
SMOOT-Holman Co. ... 35
SOULE Steel Company ... 29
STANLEY Works, The ... *
STANWOOD, Inc. ... 25
STOLTE, Inc. ... 46
SUMMERBELL Roof Sturctures ... 26
SWINERTON & Walberg Co. ... 45

TAYLOR Co., Halsey W. ... 29

U. S. Bonds ... 1

VERMONT Marble Company ... 37

WESTERN Asbestos Co. ... *
WOOD, E. K. Lumber Company ... 34

*Indicates Alternate Months

Brownskin VAPORSEAL

The resilient building paper creped to S-T-R-E-T-C-H

Quality Products Since 1895

ANGIER PACIFIC CORPORATION

55 NEW MONTGOMERY ST. SAN FRANCISCO 5, CALIF. • 7424 SUNSET BOULEVARD LOS ANGELES 46, CALIF.

A complete line of Angier products available from your building material dealer

ABBOT A. HANKS, INC.
Engineers & Chemists

INSPECTING — TESTING — CONSULTING
CONCRETE • STEEL • MATERIALS
CHEMICAL AND TESTING LABORATORIES
• RESEARCH AND INVESTIGATION •

TESTS OF STRUCTURAL MATERIALS
DESIGN OF CONCRETE MIXES
SHOP AND ERECTION INSPECTION OF STRUCTURES AND EQUIPMENT
INVESTIGATION OF STRUCTURES AND MATERIALS
TESTS AND INVESTIGATION OF FOUNDATION SOILS
FIRE RESISTANCE AND INSULATION TESTS

624 Sacramento Street, San Francisco

Robert W. Hunt Company
ENGINEERS

Inspection • Tests • Consultation

Schools and Other Structures Are Built as Designed

When Construction Materials are Inspected at point of Manufacture and during Erection by

ROBERT W. HUNT COMPANY
Los Angeles - All Large Cities

San Francisco, 251 Kearny Street

Cement, Concrete, Chemical, Metallurgical, X-Ray and Physical Laboratories

Chicago - New York - Pittsburgh

REMILLARD-DANDINI Co.

Brick and Masonry Products

★

400 MONTGOMERY STREET
SAN FRANCISCO, CALIF.

ARCHITECT and ENGINEER

INDEX TO ARTICLES AND ILLUSTRATIONS

VOLUMES 176-179, 1949

A

A.I.A. ACTIVITIES . . . . . Jan-Dec. 27
A.I.A. President Hails Building Industry. . . . . June 10
Airport, Seattle-Tacoma International (Edwin Graef). . . . . Aug. 12
Apartment House, Morocco (Boris Nepo). . . . . Apr. 20
Architect in Civic Affairs (Henry T. Held). . . . . Aug. 8
Art, News & Comment On. . . . . Jan.-Dec. 4-6
Auto Subway, International Airport, NY . . . . . Feb 9

B

Bank Building, Anglo Calif. National, Oakland (H. W. Winner) . . . . . Oct. 20
Basalt Rock Co. Strestcrate Construction. . . . . Aug. 27
Bridge, Railroad Movable, Oakland (U. S. Engineers) . . . . . May Cover
British Builders Laud Construction Industry. . . . . Sept. 12
Building Industry, The Older Worker In, (Dr. W. Schweisheimer). . . . . Feb. 7

C

Cambria Reservoir, San Jose . . . . . Oct. 23
Central Valley Water Project . . . . . Oct. Cover
Church, Temple & Community Center, Beth El Congregation, Baltimore (Eric Mendelsohn). . . . . Jan. 28
Church, Our Lady of the Sacred Heart, San Diego (Frank Hope) . . . . . July 26
Church, Memorial Chapel of Queen Astrid of Belgium. . . . . Aug. 21
Church, St. Charles, Lucerne (Max Zurcher). . . . . Aug. 22
Church, United Brethren, Everett, Wn, (Smith, Carroll, Johanson) . . . . . Dec. 16
Church, New Styles in Architecture (Arthur W. Priaulx) . . . . . Dec. 17
Church, Bethel Lutheran, Los Angeles (Quinton & Westberg) . . . . . Dec. 17
Church, Hollywood Congregational (Butler & Butler) . . . . . Dec. 18
Church, St. James Lutheran, Seattle (C. F. Nelson) . . . . . Dec. 19
Church, Inglewood First Baptist (Douglas McLellan) . . . . . Dec. 20
Church, First Lutheran, Ontario (John H. Fleming). . . . . Dec. 21
Church, Mocks Crest Community, Portland (Donald W. Edmundson). . . . . Dec. 22
Church, St. Paulus Evangelical, Oakland (H. A. Schary) . . . . . Dec. 23
Church, St. Mathews, San Mateo. . . . . Dec. 24
Commercial Standards, Recent Recommendations. . . . . Jan. 21
Contractor, How to Work with Him (H. E. Foreman) . . . . . Aug. 10
Convention, Calif. Council of Architects, Palm Springs. . . . . Oct. 10
Convention, Structural Engrs Assn, Yosemite. . . . . Nov. 10
Convention, California Council of Architects, Palm Springs. . . . . Dec. 14

E

Editorial Notes (E. H. Wilder). . . . . Jan.-Dec. 4
Elevator, Open Air, Switzerland . . . . . Aug. 21
Engineers, With The. . . . . Jan.-Dec. 32
Engineering Considerations of Times-Mirror Bldg. (D. Lee Narver). . . . . Nov. 11
Engineering Research Institute, Plans for Earthquake (Jno. A. Blume). . . . . May 13
Estimators' Guide . . . . . Jan.-Dec. 41

F

Factory Building, A. C. Horn Co., Los Angeles. . . . . Feb. 13
Factory Building, W. P. Fuller & Co., So. San Francisco (L. H. and B. L. Nishkian) . . . . . July 13
Factory Building, Vermont Marble Co., San Francisco. . . . . Oct. 8
Fair Grounds, New San Mateo County (Oscar Thayer). . . . . July 12
Floor Covering Trends. . . . . May 8
Fountain, Lucerne . . . . . Aug. 19
Foundation Soils, Art of Applying Science of Soil Mechanics to (Trent R. Dames). . . . . Dec. 7

G

Glycerine in Modern Building Materials (Milton A. Lesser) . . . . . Oct. 17

H

Headline News & Views (E. H. Wilder) . . . . . Jan. Dec. 36
Hospital, Maimonides Health Center (Mt Zion) (Eric Mendelsohn) . . . . . Jan. 26
Hospital, Veterans, New York (Dr. W. Schweishmeier) . . . . . July 10
Hospital, Berne, Switzerland (Max Zurcher). . . . . Aug. 20
Hospital, U. S. Army Air Base, Fairfield . . . . . Oct. 21

I

Interiors, Remodeled, Designed by Klaus Pfeffer. . . . . June 11
Interlaken, Switzerland . . . . . Aug. 18

L

Laboratory, Vitamin, Wolhusen, Switzerland (Max Zurcher).. Aug. Cover

M

Mausoleum, Lincoln Memorial Park, Portland (Jos. W. Heiler) Mar. 12

Mendelsohn, Eric, Sketches and Write-up Jan. 22

Morocco's Architecture (Boris Nepo) Apr. 20

O

Office Building, Equitable, Portland (Pietro Belluschi) Apr. 8

Office Building, General Petroleum, Los Angeles (Wurdeman & Beckett) June 16

Office Building, Mirror-Times, Los Angeles (Roland H. Crawford) Cover Feb. 14

Office Building, Mirror-Times, Engineering Considerations (D. Lee Narver) Nov. 11

Office Building, Morris Plan Co., San Francisco (Bliss, Hurt, Trudell & Berger) Aug. 29

Office Building, Pacific Gas & Electric Co., San Francisco (Arthur Brown Jr. & John Bakewell) Mar. 23

Office Building, Pacific Telephone & Telegraph Bldg., Oakland (Thomsen & Wilson) Cover Sept. 5

Office Building, Prudential Insurance Co., Los Angeles (Wurdeman & Beckett) Cover Mar. 19

Office Building, Stolte Co., Oakland (Warren McClure) Oct. 19

Office Building, Westinghouse Elec. Corp., San Francisco (Albert F. Roller) Nov. 15

Office Building, E. K. Wood Lumber Co., Oakland (Young & Lloyd) Cover Feb. 14

P

Planning & Restoration of British Towns Apr. 7

Public Building, Oakland Public Library (Miller & Warnecke) Oct. 22

Public Building, California State Capitol Wing, Sacramento Cover Nov.

Producers Council Page Apr.-Dec. 34

Public Relations and the Architect (Robt. J. McAndrews) Mar. 10

R

Rathanskeller, Lucerne Aug. 20

Residence, Morocco (Boris Nepo) Apr. 21-22

Residence, Morocco, Mme. Dupuis (Boris Nepo) Apr. 25

Residence, Morocco, Pons (Boris Nepo) Apr. 25

Residence, Morocco, Calle (Boris Nepo) Apr. 25

Residence, J. W. Seibert, Pasadena (Elmer Gray) May 14

Residence, W. B. Boland, Oakland (J. A. Daley & J. Walls Hastings) May 22

Residence, Interior, Francis Keran, Berkeley (Klaus Pfeffer) June 12

Residence, Interior, A. Y. Yerrick (Klaus Pfeffer) June 13

Residence, Interior, Frank B. Steward (Klaus Pfeffer) June 14

Residence, Chalet, Switzerland (Max Zurcher) Aug. 24

Residence, William F. Phillips, Lafayette (Johnson & Anderson) Sept. 10

Residence, Sweetland, Piedmont Oct. 24

Residence, Living Room, Hearst Ranch House Oct. 25

Residence, Mr. and Mrs. Roy F. Mattock, Hillsborough (Angus McSweeney) Cover Dec. 10

Restaurant, Stadthof, Switzerland (Max Zurcher) Aug. 20

S

School, Catlin Grade, Kelso, Wn. (Wolff & Phillips, Arthur Priaulx) Jan. 8

School, Rosary High, San Diego (Frank L. Hope) Cover Apr.

School, Edmonds Grade (The Square Classroom), Edmonds, Wn. (Wm. Arild Johnson & Harold W. Hall) Apr. 14

School, Orville Wright, Modesto (Swartz & Hyberg) May 18

School, Claremont Men's College, Appleby Hall (Allison & Rible) Cover July 17

School, College of Puget Sound, Field House (Dugan, Mock & Morrison) Arthur Priaulx July 20

School, The Movable Classroom (Arthur Priaulx) Oct. 10

School, Gymnasium, Bell and Montebello (Marsh, Smith & Powell) (Kistner, Curtis & Wright) Oct. 28

State of California Work, Architects Selected Jan. 13

Store Building, Auto Accessories, Morocco (Boris Nepo) Apr. 24

Store Bldg., Alterations, Clay Store, Milwaukie, Ore. (Cochrane, Hartford & Keuttner) Apr. 29

Store Bldg., Roos Bros., San Jose (Albert R. Williams) Aug. 14

Store Bldg., J. C. Penney Co., Modesto (Rossyn & Gartner) Oct. 21

Store Bldg., Rucker-Fuller Co., S. F. (Bolton White) Oct. 21

Store Bldg., Berglund Tractor Co. Napa (E. F. Reed) Oct. 21

Store Bldg., Milliron Dept. Store, Los Angeles (Victor Gruen) Nov. 20

Stolte Company's Western Construction Adventure Nov. 10

Structural Engineers Convention, Yosemite Nov. 10

Switzerland Builds (Wm. A. Newman) Aug. 18

T

Theatre, Morocco (Boris Nepo) Apr. 23

Traffic Problem Can Be Solved (Leslie Williams) June 27

Transportation, San Francisco, A Plan for Mass (Geo. S. Hill) Mar. 21

Tunnel, Brooklyn Battery, N. Y. (Dr. Wm. Schweisheimer) May 10

U

University, Hebrew of Palestine (Eric Mendelsohn) Jan. 24

University, The World, Berkeley (Eric Mendelsohn) Jan. 30

U. S. Navy Ordnance & Optical Bldg., Hunters Point (E. J. Kump) Feb. 10